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Wireless Nation

What's Right For Your Enterprise?

by Elizabeth Millard

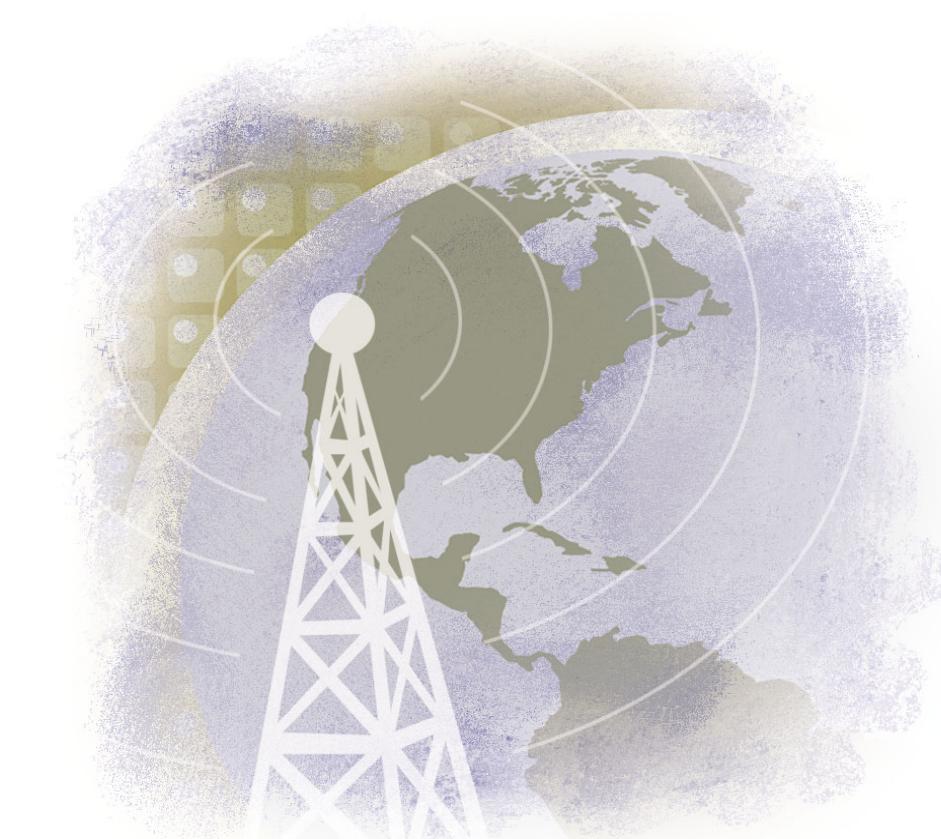
WITH A MORE MOBILE-MINDED workforce, it seems that there are new wireless options every day, from multifeatured access points to new devices that tap into hotspots to service plans that pack an array of support features into a monthly fee.

But with choice can come a feeling of being overwhelmed—how much wireless does a company really need, anyway? And with campus-wide wireless access, will there be security issues and access concerns that keep an IT manager's pager beeping well into the wee hours of the night?

There is a way to roll out wireless without feeling like it's taking over far too many IT resources, experts note. Like other kinds of technologies, a wireless strategy requires extensive initial planning but also a willingness to remain flexible after rollout as support and security issues crop up.

Creating A Plan

The first step in a wireless implementation doesn't involve any tech purchasing or even perusal of service options. Instead, what's required is an in-depth look at what problems wireless will solve and how use of the tactic will change IT resource allocation. Going wireless simply for the sake of it will likely cause more issues to crop up



rather than addressing what pain points already exist.

Constant connectivity is crucial for small and medium-sized enterprises, especially in today's fast-paced environment, notes Russell Morgan, president of the Information Technology Solution Providers Alliance (www.itspa.net), a nonprofit industry group.

"Data communications provided through cellular networks gives business owners the capability to be in touch anywhere they have cell phone coverage and anytime that their mobile phones are on," he says. "But the many device, network, and service options available mean that small businesses need to

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How Big Of An IT Staff Do You Need?

Three Methods Help You Determine Ideal Staff Size

by Will Kelly

IT STAFF SIZE CAN BE a point of contention in many organizations as many different departments jockey for their share of the company's budget. To some corporate

cultures, IT staffs are merely a support function, meaning that IT management has to arm itself with industry standards to bolster its business case for staffing.

Frank Scavo, president of Computer Economics (www.computereconomics.com),

an industry analyst firm, says, "IT is a people business. Labor and staffing were typically 30 to 40% of the typical IT budget these past 15 years."

With staffing playing such a big role, companies typically use one of a few different methods for determining just how big their IT staff should be.

Supply & Demand Staffing

One methodology is supply and demand staffing, which requires some general foresight and knowledge of the ebbs and flows of your data center's ongoing projects and work. You can implement supply and demand staffing by analyzing your data center's busy periods. Look for patterns in these busy periods and adjust your current staffing schedules accordingly. The busy

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"IT is a people business. Labor and staffing were typically 30 to 40% of the typical IT budget these past 15 years."

-Computer Economics' Frank Scavo

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When it comes to wireless, there are so many options, it's easy for data center/IT managers to be overwhelmed. We sort through the clutter to help you find the best strategy.

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■ **BMC Software** released Mainframe Discovery Tools, which will help companies discover mainframe assets. ■ **Breach Security** unveiled an updated version of its ModSecurity open-source Web application firewall. ■ **Emerson Network Power** and **Knurr** teamed up to deliver a new line of racks and cabinets that offer integrated power and cooling features. ■ **Exabyte** says its new StorageLoader LTO-2 is the first 1U, LTO-2 autoloading tape library. ■ **iPass** introduced iPass Device Lockdown to protect remote systems and mobile devices. ■ **Juniper Networks** unveiled the DX 3280 and DX 3680 acceleration and load balancing platforms. ■ **MetaSolv Software** released MetaSolv Provisioning 6, an order change management program. ■ **Overland Storage** released its Ultamus RAID family of protected primary storage appliances. ■ **Silver Peak Systems** released the NX-8500 WAN acceleration appliance.

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**1. What is the size of your company
(how many employees)?**

- Less than 10
- 10 - 99
- 100 - 199
- 200 - 499
- 500 - 999
- 1,000+

**3. What is your annual computer hardware/
software purchasing budget?**

- \$0 - \$9,999
- \$10,000 - \$24,999
- \$25,000 - \$49,999
- \$50,000 - \$99,999
- \$100,000 - \$249,999
- \$250,000 - \$499,999
- \$500,000 - \$999,000
- \$1,000,000+

**2. How often do you purchase computer
hardware/software?**

- Weekly
- Bi-weekly
- Monthly
- Quarterly
- Annually
- No Involvement

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Upcoming IT Events

- NOVEMBER -

Atlanta ITC 2006

November 1-2
Atlanta, Ga.
www.goitec.com

FS/TEC

November 5-8
Long Beach, Calif.
www.fstec.com

TDWI World Conference 2006

November 5-10
Orlando, Fla.
www.tdwi.org

Business Rules Symposium Series

November 7-8
New York, N.Y.
www.brainstorm-group.com

Enterprise Architecture Conference Series

November 7-8
New York, N.Y.
www.brainstorm-group.com

Technology + Learning Conference

November 8-10
Dallas, Texas
www.nsba.org

SC2006

November 11-17
Tampa, Fla.
sc06.supercomputing.org

Philadelphia ITC 2006

November 15-16
Philadelphia, Pa.
www.goitec.com

- DECEMBER -

Search Engine Strategies 2006

December 4-7
Chicago, Ill.
www.jupiterevents.com

Portland ITC 2006

December 6-7
Portland, Ore.
www.goitec.com

ITC East

December 12-13
Harrisburg, Pa.
www.govresources.com

- JANUARY -

Storage Visions 2007 Conference

January 6-7
Las Vegas, Nev.
www.storagevisions.com

WCA International Symposium & Business Expo

January 16-19
San Jose, Calif.
www.wcai.com

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Editorial Staff
131 W. Grand Drive • Lincoln, NE 68521
editor@processor.com
FAX: (402) 479-2104

MarketPlace NEWS

**McAfee Fears It Will Be Locked From Vista**

DESPITE MICROSOFT's commitment to provide programming techniques to enable third-party companies to access the Windows kernel, McAfee claims Microsoft will wait too long to provide security software manufacturers the information they need. The debate centers on a new Vista feature called PatchGuard designed to protect the Windows kernel from hackers, but that feature also keeps security software manufacturers from creating software that works with and protects the OS. Microsoft says McAfee's claims are "inaccurate and inflammatory," and that it will change the OS when an update comes out, although no timetable has been set for that update.

HP Top PC Maker Worldwide

HP RECLAIMED ITS TITLE as the No. 1 PC maker worldwide during the third quarter, according to research firms IDC and Gartner. The lead over Dell is slight, with Gartner saying HP has 16.3% of the market to Dell's 16.1%. In the United States, however, Dell kept its hefty lead, with a 31% share of the market compared to HP's 22%, according to IDC. The rest of the top five, according to IDC: Gateway with 6%, Apple with 5.8%, and Toshiba with 4.2% market share.

Toshiba May Seek Damages From Sony

TOSHIBA IS CONSIDERING seeking monetary compensation from Sony for damage to the company's brand image and loss of potential sales related to the recall of notebook batteries made by Sony. Toshiba is one of a number of notebook manufacturers, including Dell, Lenovo, and HP, that were forced to recall notebook batteries after several cases of the Sony-made batteries catching fire. Sony is paying for the recall costs, but Toshiba is the first company to say it may seek additional money from Sony; Fujitsu has said it has no plans to seek additional damages because it has seen no sign of sales problems as a result of the recall.

Government Agencies Report Data Loss

A SURVEY CONDUCTED by the Committee On Government Reform shows that loss of personal data by U.S. government agencies has been a regular occurrence in the recent past. The survey polled 19 government agencies and found that all of them had at least one incident of personal data loss since January 2003. In addition, many departments have not been tracking all possible losses of personal data, and when they do track the losses, they often do not know what information has been lost or how many individuals could be impacted by the loss. Contractors, which government agencies rely on heavily, were responsible for many of the reported breaches. The Department of Treasury reported the most security breaches at 340, followed by the Department of Commerce with 297 incidents.

IT Job Cuts Rose In Q3

ACCORDING TO THE "Tech Spending Slowdown on the Horizon?" report from outplacement consultancy Challenger, Gray & Christmas, the third quarter saw job cuts in the IT sector increase 74%, from 29,226 in Q2 to 50,957 in Q3. The total IT job cuts for the second quarter were the lowest they had been since the third quarter of 2000. The breakdown for Q3 reveals the majority of the cuts, 65%, came from companies

restructuring and cutting costs. Other reasons included outsourcing, lower demand and sales, increased competition among companies, and firms closing. The computer sector suffered the most job cuts with 30,511, which was higher than the 30,342 in the first and second quarters combined.

CEOs Pessimistic About Economy

BUSINESS RESEARCH FIRM The Conference Board reports that for the first time in almost five years, the majority of CEOs are feeling pessimistic about the economy. That is, there are more pessimistic CEOs than optimistic ones. The Conference Board uses an index, the Chief Executives' Confidence Measure, to gauge CEOs' feelings, and the index for the third quarter dropped to 44 points, down from 50 points in the quarter before. When the score drops below 50 points, it indicates that the CEOs surveyed are answering more questions negatively than positively. Analysts see this pessimism stemming mainly from recent slowed economic growth and the belief that it may continue into the new year.

Phishing Kit Sales Go Up

PHISHING TOOLKITS ENABLE criminals to spoof banking Web sites with a limited amount of effort. During the past year, the number and quality of these kits has gone up dramatically. Although the price of kits depends on several variables, according to a recent Websense Security Trends Report, kits range from \$30 to \$3,000. Many of these kits come with claims that they are immune to common defensive techniques, including signature-based detection and pattern recognition. Higher-end kits also may come with exploit codes, which make use of new or unknown browser vulnerabilities.

Google Plans Solar-Powered Office

IN A MOVE TO PROVE that companies can be "both Green and profitable," according to David Radcliffe, vice president of real estate at Google, Google has made plans to build a solar-powered electricity system at its headquarters in Mountain View, Calif. When the rooftop solar-powered generation system is completed, it will be capable of powering 1,000 California homes, or the equivalent of 1.6 megawatts of electricity. Excluding the power used by Google's data centers, the company will rely on solar power for nearly a third of its electricity.

Cell Phone Shipments On The Rise

ACCORDING TO IDC, the world's top cell phone manufacturers (Nokia, LG Electronics, Samsung, Motorola, and Sony Ericsson) are on track to ship their billionth handset by

the end of this year. As a whole, the mobile phone makers shipped 254.9 million phones in Q3, a 7.9% increase from last quarter and a 21% increase from Q3 last year. But despite record sales, Nokia and Motorola (the two largest makers) have not seen larger profits. The reason for the discrepancy seems to be that phones are being sold at extremely low prices to developing markets, including China and India, resulting in a drop in the average cost per handset.

Google Reports Q3 Earnings

SEARCH GIANT GOOGLE'S third-quarter earnings nearly doubled compared to the same figures a year ago. Google saw its net income for the quarter increase from last year's \$381.2 million, or \$1.32 per share, to \$733.4 million, or \$2.36 a share. Likewise, revenue surpassed analysts' expectations as it shot up from \$1.58 billion last year to \$2.69 billion this year, a jump of 70%. This revenue total was up 10% over the second quarter's reported \$2.46 billion in revenue. After subtracting \$825 million in what it pays to Web sites that display its advertisements, also referred to as traffic acquisition costs, Google's adjusted revenue was \$1.865 billion.

Security Software Makers & Microsoft Face Off

LAST WEEK MICROSOFT held an online briefing with security software developers to discuss how third-party security software will be able to interact with Microsoft's new Windows Vista operating system. The meeting followed the announcement that software will be able to disable Windows Security Center alerts and access the kernel of the 64-bit Vista, changes made in response to concerns voiced by the European Commission, as well as Symantec and McAfee. Vista is still scheduled for release to enterprise customers next month.

Growth In Microsoft Windows Phones

SMARTPHONES THAT USE Microsoft's Windows Mobile software for applications including email, games, and mobile television doubled this past year, reaching a total of 6 million. Microsoft executives say the company intends to continue that growth rate in the future, and it's exploring options for how it can hook up Windows Mobile smartphone users with the company's Xbox Live online video game console. Microsoft's main competitor in the smartphone arena is Symbian, which is owned by the world's leading handset makers, one of which is Nokia, who holds half the worldwide smartphone market. BlackBerry from Research In Motion is another competitor to smartphones; it has about 6 million users.

WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 16 major companies in the technology market.

Company	Symbol	Year Ago	Oct. 16 \$	Oct. 23 \$	% change from previous week
Avaya	AV	\$11.65	\$12.23	\$11.84	▼ 3.19%
BEA Systems	BEAS	\$8.55	\$15.74	\$16.25	▲ 3.24%
Computer Associates	CA	\$26.72	\$23.94	\$24.91	▲ 4.05%
Cisco Systems	CSCO	\$17.20	\$24.59	\$24.43	▼ 0.65%
Dell	DELL	\$32.38	\$24.62	\$23.60	▼ 4.14%
Electronic Data Systems	EDS	\$21.53	\$24.60	\$24.43	▼ 0.69%
Google	GOOG	\$308.70	\$421.75	\$480.78	▲ 14%
HP	HPQ	\$27.64	\$38.76	\$39.87	▲ 2.86%
IBM	IBM	\$84.17	\$86.71	\$91.56	▲ 5.59%
Intel	INTC	\$23.69	\$21.61	\$21.45	▼ 0.74%
McAfee	MFE	\$30.46	\$27.63	\$27.14	▼ 1.77%
Microsoft	MSFT	\$25.09	\$28.45	\$28.45	Unchng.
Oracle	ORCL	\$12.19	\$18.99	\$19.15	▲ 0.84%
Red Hat Software	RHAT	\$21.70	\$19.84	\$18.87	▼ 4.89%
Sun Microsystems	SUNW	\$3.97	\$5.22	\$5.20	▼ 0.38%
Symantec	SYMC	\$22.68	\$21.63	\$21	▼ 2.91%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

PC & OEM Builders

When Brand Names Just Won't Do

by Sixto Ortiz Jr.

• • •

DELL, SUN, HP, IBM . . . the names of these hardware titans are quite well known to IT administrators everywhere. These companies are multibillion-dollar corporate behemoths because time and time again, enterprises count on them to meet their PC and server hardware needs.

However, the standardization of PC components makes it possible for anyone to build a PC or server from scratch. So even though the major players in the PC marketplace enjoy substantial market share, there is also a thriving marketplace of independent businesses that build and sell customized systems.

Sometimes it is more advantageous for a business to go with a customized system than with a brand name. Read on to take a look at the overall PC marketplace and a few examples of custom PC/OEM system builders.

The PC Marketplace Today

According to market research firm IDC, the worldwide PC marketplace grew at a 16% clip last year. IDC expects growth to slow substantially this year, down to 10.5%; in 2007 and 2008, growth will pick

SNAPSHOT

ASA Computers

Pricing varies; as an example, ASA Computers' Linux Notebook INL retails for approximately \$1,100

A variety of systems for sale, from desktops to notebooks to servers

www.Processor.com/ASA2

back up to around 12%. IDC's research methodology counts desktops, notebooks, ultra portables, and x86 servers as PCs and gathers worldwide statistics by tracking the marketplace in 55 countries.

Factors contributing to the observed and forecast growth in the PC marketplace, IDC's research finds, include slower adoption in what the company calls mature markets—such as the United States, Western Europe, and Japan—and rapid growth in PC adoption in emerging markets. The company also believes that consumer notebooks will drive the PC marketplace as desktop adoption wanes in both the enterprise and consumer marketplaces and more powerful notebook computers continue to fulfill their roles as full desktop replacements.

In terms of the worldwide server marketplace, IDC's research finds factory revenue grew 0.6% year over year during the second quarter of 2006. This, according to IDC, is the first positive uptick in revenue growth since the third quarter of last year.

While the growth of Linux servers slowed, IDC found the growth of Unix servers declined, while Windows servers enjoyed positive growth.

ASA Computers

ASA Computers has been building custom servers since 1989, an eternity in the

SNAPSHOT

Ibex Computers

Sempron-based home office systems start at \$299; Intel Pentium D systems retail for \$499; Linux systems start at \$329 and go up to \$549

Great online customization tools, so configuring a system to meet your needs is trouble-free

www.Processor.com/Ibex

ever-changing and fickle computing business. The company offers a wide variety of customized systems, including 1U Intel and AMD-based servers, desktops, Linux and Intel-based notebooks, and even gaming desktop PCs.

For example, ASA Computers sells a Linux notebook running an Intel Pentium M CPU and preloaded with Fedora Core 5. The company also sells a line of value desktops running Intel's Pentium 4, D, or Celeron D CPUs and priced competitively at approximately \$500.

Customers from end users to VARs and resellers are served by two ASA Computers offices (Santa Clara, Calif., and Boston), accepting a variety of payment methods, including credit cards, cashier's checks, COD, and purchase orders.

Ibex Computers

Founded in 1998 and based in Des Plaines, Ill., the IbexPC.com Web site prominently advertises the fact that the company is frequently awarded the Yahoo! Top Service Five Stars rating. Ibex's offerings include barebones, home and office, gaming, and Linux systems running all the latest chips from AMD and Intel, including the Core 2 Duo, Pentium 4, Pentium D, Sempron

SNAPSHOT

Servers Direct

Systems range in price from entry-level 1U servers to advanced 8U storage servers retailing for more than \$7,500

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www.Processor.com/ServersDirect

64, Athlon 64, and Athlon 64 X2 Dual Core.

Ibex also sells a full line of space-saving Mini Barebones systems based on the Micro ATX form factor, so if you're interested in a fully customized space-saving machine, Ibex is the place to go.

Even though the major players in the PC marketplace enjoy substantial market share, there is also a thriving marketplace of independent businesses that build and sell customized systems.

Buying Tips

Customize, customize. One of the reasons to go with a PC/OEM builder is to find a level of customization not possible with run-of-the-mill manufacturers. Be sure to find a builder that can customize systems according to your unique needs.

Warranties provide protection. A good warranty protects your investment in expensive hardware, so be sure to pay attention to the fine print.

Service and support. With all hardware purchases, service and support are critical. Be sure to do business with a company that can support you after the sale is done.

Look for volume discounts. Some system builders have the capability to offer significant discounts when you buy in volume.

Functional Web site. A functional Web site that allows for extensive system customization can save you lots of time.

Flawless Computers

As with other companies in this roundup, Flawless Computers offers fully customized computers under its Innova, Fusion, Apex, and Ultima series running both Intel and AMD CPUs. For example, Flawless' Fusion systems are available powered by both AMD's Athlon 64 and Intel's Pentium 4 chips, while the company's Apex systems are based on AMD and Intel's dual-core CPUs.

Customizing a system to meet your needs is as simple as using the company's Web-based system to choose amongst all the available processor, case, storage, audio, video, and software options. For example, productivity software options range from the free OpenOffice suite to the \$310 Microsoft Office 2003 Professional suite.

The company offers a standard three-year warranty and accepts both credit card and personal or business check as methods of payment. Flawless Computers takes pains to locate quality components for its systems that will not fail while in use. The company also purchases system components that are fully supported by the manufacturer and discontinues purchasing components that are no longer supported by manufacturers.

More Custom Options

This is just but a sampling of the wide variety of PC/OEM system builders available to you today. (For a list of additional system builders, visit Processor online at www.processor.com.) While all of these companies are different, they are all similar in the sense that they offer an alternative to those seeking to do business and buy their hardware from someone other

SNAPSHOT

Flawless Computers

Budget Innova series starts at \$629 to \$699, while Ultima series range in price from \$2,419 to \$2,499

Customized desktop systems featuring high-quality, fully supported components

www.Processor.com/Flawless

than one of the established PC and server manufacturers. PCs and servers aren't going away anytime soon; as long as corporate America continues to clamor for hardware, there will be a thriving marketplace for custom PC/OEM system builders. **P**



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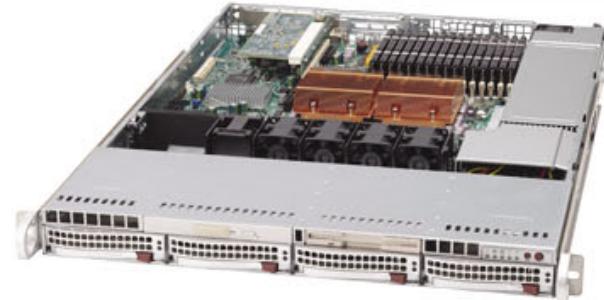
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Dempsey/Woodcrest Server Starts at

\$2024



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- Supports upto 64GB FBDIMM.
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- 2xIntegrated Dual 10/1000 LAN.

I Xeon Server Starts at

\$4015



- 5U Dual Xeon 2.8 Ghz 800 FSB.
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- 512 MB RAM
- Fail hard drive LED indicator.

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we will get you a solution.

Value Server V210 Starts at

\$528



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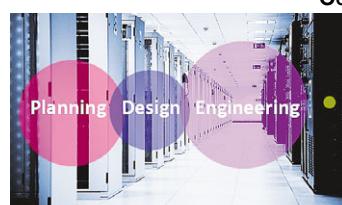
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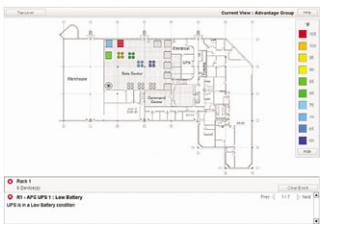

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The Wireless Security Update

You Can Fix What Is Broken

by Chris A. MacKinnon

SECURITY IS UNDOUBTEDLY one of the enterprise's biggest worries when it comes to providing wireless access to employees. Because of its exploitability, WEP (Wired Equivalent Privacy) did some damage by not preventing eavesdropping on wireless network traffic. But what about current encryption systems such as WPA (Wi-Fi Protected Access) and WPA2 (the WEP successors)? Do similar worries exist with these systems? And what about companies that are still using WEP code? How do these companies justify WEP's replacement?

A Big Worry

Joel Riciputi, director of product and corporate marketing for Network Chemistry, says by their very nature, wireless networks are difficult to roll out, secure, and manage, even for the most savvy network administrators. Riciputi says, "Wireless networks offer great potential for exploitation for two reasons: They use the airwaves for communication, and wireless-enabled laptops are ubiquitous. To make the most of their security planning, enterprises need to focus on threats that pose the greatest risk."

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He says an IT department must have a pre-emptive plan of action to prevent malicious attacks and employee misuse that compromise an organization's data privacy and enforce security policies for wireless use—both inside and outside its facilities.

Shawn Rogers, product manager for ZyXEL, says your corporate network traffic is just floating through the air, available for anyone to capture. He says, "With the right equipment, your data can be captured and



read by hackers over a mile away. A corporate spy can sit in the parking lot of the building next door and roam your internal network. It's a very scary proposition." Rogers says the industry has a number of features to counteract these problems, and finding compatible and secure wireless products is as simple as looking for the Wi-Fi Alliance logo on the product packaging.

No Repeats

Will enterprises be singing the WPA and WPA2 blues, as they did with WEP? Rogers says the short answer is, "Not really." He says WPA and WPA2 have addressed the issue of easily deciphering the security key, using time-tested methods of encryption—TKIP (Temporal Key Integrity Protocol) and AES (Advanced Encryption Standard).

Rogers says WPA2 that uses 802.1x is most often referred to as WPA-Enterprise, although wireless networking vendors use different terms for it. The non-802.1x implementation is most often referred to as WPA-Home or WPA-PSK (preshared key). He says, "If you are buying a new wireless router or access point, you should take care to review the packaging and make sure both versions of WPA are supported. If you choose not to use 802.1x with WPA2, you'll find yourself in a similar scenario as WEP users, in that all users use the same password to gain access to the wireless network."

Brian Larsen, D-Link's associate vice president of product management, says wireless security options include WEP, WPA-PSK, WPA-EAP (Extensible Authentication Protocol, aka WPE-Enterprise), WPA2-PSK, and WPA2-EAP. He says because WPA-PSK and WPA2-PSK both use a preshared key, if the key is weak, the strength of the encryption doesn't matter. Larsen notes, "The key used is like a group password, and while the actual encryption keys used are unique per user and are changed periodically, if the PSK is easy to guess, the WLAN is at risk of compromise. The PSK is used as a starting point to generate the encryption keys (not as the encryption key itself) and uses much stronger encryption."

Larsen says PSKs are only intended for cases where 802.1x authentication is not possible or cost effective. He notes, "A PSK only says that someone with the key is accessing the network, and if the key is compromised, it must be changed for all users. For corporate applications, WPA-EAP is a far better solution."

Out With WEP

Rogers says justifying WEP's replacement in the enterprise is easy because WEP is not security. Rogers notes, "The encryption is easily bypassed, and a business should not be using one password for all of their users for reasons detailed previously." Riciputi says there is no amount of denial that will make WEP adequate for protecting a network. He says, "There are many solutions that can be used in its place, so phasing out WEP is easy to do. Organizations that haven't made the migration from WEP should seriously consider moving to WPA2/802.11i."

Riciputi says some older devices may not support WPA2/802.11i, but most (if not all) infrastructure and endpoint devices that support WEP are usually capable of using WPA in its place. "Sometimes," Riciputi says, "it simply won't be possible to migrate away from WEP when embedded devices such as 802.11 VoIP handsets are involved. In cases like these, organizations can choose to migrate the rest of their infrastructure to newer encryption and authentication standards but still maintain a separate network for the WEP devices that are quarantined from the rest of the enterprise LAN."

Larsen says the cost of upgrading to secure equipment pales in comparison to the cost of a compromised LAN. He notes, "Since a compromised wireless LAN can provide a path around the corporate firewall, the potential for significant damage is quite high. Most companies today consider their

LAN as business-critical, so protecting that asset should be a very high priority, and replacing old wireless products to secure the wireless network is a very cost-effective way to close a significant vulnerability gap."

The Big Picture

Larsen says security is both complex and critical. He explains, "There are two parts to the problem—authentication and encryption. Encryption is the topic most talked about, but for a corporate application, authentication is just as important, since a secure network needs to know and control who has access, when, and to what resources."

Riciputi says although secure encryption methods are available, these solutions don't protect the wireless traffic once it leaves the access point. He says, "A complete solution should include end-to-end encryption with a VPN, firewall capabilities, and an automated wireless threat protection solution to prevent attacks and employee misuse of both wireless networks and wireless devices such as corporate laptops." □

What's On The Horizon?

It seems like researchers are always looking to improve security standards. Joel Riciputi, director of product and corporate marketing for Network Chemistry, gives us a peek into improving wireless security standards:

"Overall, wireless security research has begun to primarily target client devices. Issues with wireless driver vulnerabilities have been around for some time; however, they have not received much scrutiny by the general security community until recently. Expect to see more driver issues uncovered as security researchers race to find all of the low-hanging fruit that has been left by sloppy device driver programmers. This trend is also seen in the increased focus on finding and exploiting wireless client managers probing for preconfigured networks."

"For the latest information on emerging wireless threats, the WVE (Wireless Vulnerabilities and Exploits) database (www.wve.org) catalogues security threats for products or protocols specifically designed for wireless communications including, but not limited to, 802.11, Bluetooth, VoWLAN, RFID, WiMAX, and other emerging wireless standards. Businesses and organizations can leverage the site to determine the exact nature of the vulnerabilities they face with a standard nomenclature for describing those threats at no cost to them or their organizations. By providing a standard list for publicly known wireless security threats and establishing a common nomenclature, WVE acts as a clearinghouse for clear, consistent industry communications."

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802.11n Hits A Speed Bump

The New Standard Battles For Approval

by Chris Jackson

FOR COMPANIES AWAITING the arrival of 802.11n wireless equipment, word from the IEEE's TGn (Task Group N) indicates that consensus for the new standard is still far away. With two competing proposals unable to garner sufficient votes, SMEs face two choices: defer deploying 802.11n

What's The Big Deal? The Promise Of 802.11n

For users who've just recently adopted 802.11g wireless systems, the clamor over 802.11n may seem like much ado about nothing. Yet 802.11n promises substantial improvements in both speed and distance of service over prior wireless technologies.

By using MIMO (multiple input/multiple output) technology, 802.11n vendors are able to use multiple radio signals to transfer data simultaneously. This channel-bonding technology claims to provide transfer rates as high as 600Mbps, although real-life usage will be a fraction of that. Even accounting for marketing hyperbole, 802.11n should be significantly faster than the reigning speed king, 802.11g.

hardware or deploy "draft-standard" equipment that may not be interoperable with the final 802.11n standard.

The IEEE Process

Establishing new wireless standards is conducted under the aegis of the IEEE. After a new technology receives sponsorship and a PAR (Project Authorization Request) is reviewed, the IEEE assembles a working group to evaluate the proposals for the new technology and creates a draft standard that is voted on by interested IEEE members.

Where the 802.11n process has run aground is in this voting process. Draft standards require that 75% of the ballots be returned, and 75% of voters that return ballots approve to advance to the IEEE's review committee; the most recent draft standard received less than 50% of the vote. In addition to the deficit of approving voters, the TGn received more than 10,000 comments (requests for change or clarification).

Competing Camps

Despite the early warnings of doom and gloom emanating from the IEEE vote, the result has forced the two competing industry groups to collaborate on a new proposal that will be voted on in the first quarter of next year. Although 802.11n received its PAR in 2003, the IEEE is aiming for final publishing of the standard in July 2008.

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In addition to the impetus created by the logjam in the IEEE, a new vendor group spearheaded by Intel was formed to help push the creation and approval of the new standard. Not only do the chipmakers stand to gain from additional component sales, but the computer industry sees 802.11n prompting a cascading series of upgrades that will boost revenue. For many, a long delay could have dramatic earnings implications.

A Standard In Name Only

Not content to limit its involvement to an industry workgroup, Intel has also decided to deploy 802.11n chips in its upcoming Santa Rosa chipset. Dubbed a "draft standard," Intel aims to both prod the IEEE, as well as gain an advantage by deploying 802.11n ahead of its competition. According to Intel

The risk with early adoption of "draft-standard" equipment is that the standard may change, leaving SMEs with equipment that can't interoperate with the final specification. An additional risk is interoperability with your legacy wireless infrastructure. Third-party tests have indicated that many consumer-grade 802.11n devices wreak havoc with existing 802.11a/b/g networks.

Upgradeability?

One promise touted by hardware vendors is that early adopters can mitigate risk by upgrading firmware in the draft-standard hardware. If history provides a track record to judge this, users better prepare to be disappointed. Upgrading wireless gear depends upon three factors: hardware compatibility, firmware compatibility, and vendor desire.

Hardware compatibility requires the chipsets to be interoperable across any future specifications; changes to the standard may degrade performance or prohibit interoperability completely. Firmware compatibility necessitates design decisions that allow flexible reconfiguration of the device to accommodate changes in the 802.11n standard. Finally, SMEs are at the mercy of the hardware vendors to implement upgrades if those two criteria are met.

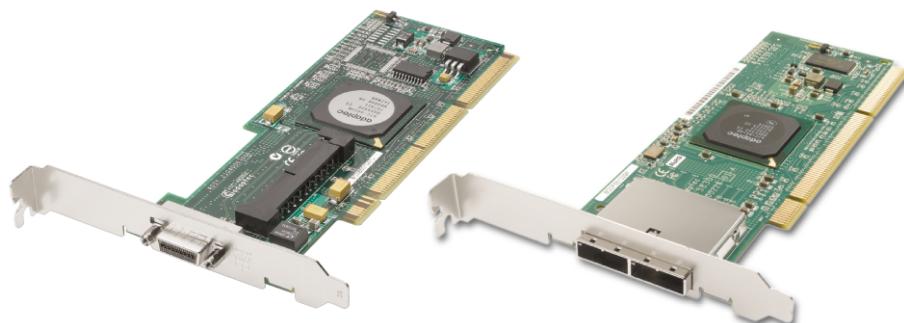
Enter At Your Own Risk

For SMEs contemplating upgrading their wireless infrastructure, using pre-standard 802.11n hardware poses risks. From concerns about interoperability with legacy hardware to interaction with other equipment, the risks are high. Commercial-grade 802.11n gear is scarce as vendors await an IEEE resolution. However, Intel's decision vis-a-vis Santa Rosa may push vendors to deploy ahead of schedule. If your SME decides to live on the bleeding edge, using a single vendor may help mitigate interoperability issues. □



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VoIP On The Move

Only A Matter Of Time Before VoIP Is Unfettered From The Desk

by Ericka Chickowski

• • •

As VoIP phones GRACE the desks of more and more workers across the globe, analysts and experts believe that the next logical step is to take the technology to the street—quite literally.

Many believe that it is only a matter of time before mobile VoIP technology begins to proliferate within the SME as much as fixed VoIP solutions. The progression is all a part of the convergence between voice and data that is evolving every day, experts say.

"At the end of the day, convergence is at all levels," says Monica Pal, founder of LignUp (www.signup.com), a VoIP software company. "Me, as a human being, I want to converge my work and my home life. I want to converge my communications—I have all of these devices, but I would rather be able to communicate with whatever is convenient for me."

Like Pal, many people are increasingly looking for ways to converge their business and home lives, their entertainment and their business needs, and their connectivity options into as few devices as possible. As busy executives and salespeople crave connectivity, demand is also growing in the enterprise and SME market space for mobile VoIP technology.

Cellular VoIP—Not There Yet

According to Lisa Pierce, analyst for Forrester Research, cellular carriers are not

yet ready to provide full VoIP service through their infrastructures. Current high-speed cellular technology such as EVDO is too slow, and while UMTS (Universal Mobile Telecommunications System) may be able to support VoIP, it is currently



too expensive for carriers to deploy on a wide scale.

"From a real service that a carrier is endorsing [it will be] something more than two years—between two and five years," Pierce says.

The attitudes of carriers are starting to change, however, as they see that if they can't beat the VoIP market, they can join it. The bigwigs at carrier networks are in the process of refining what is called the

IMS (IP Multimedia Subsystem), which is an architecture that supports the integration of cellular technology and wireless data with VoIP protocols and applications. Basically, it is what will enable the large providers to enter the market by providing better ways to create dual-mode functional products and enable large-scale deployments.

According to Pal, IMS provides the foundation for SIP (Session Initiation Protocol), the standard for VoIP communication, to be able to work over existing carrier infrastructure. From there, vendors such as LignUp are given a platform to create a whole slew of VoIP software that can allow developers to build Web applications that utilize the technology to automate calls over the data stream and to integrate VoIP into existing applications.

"And so really, at the application server level, thanks to architectures like IMS and thanks to standards like SIP, we can actually provide our services across all of these networks," Pal says.

Application Development

So with better architecture in place and carrier networks working to make VoIP feasible for business, what are third-party vendors creating to make it all worthwhile? In other words, why should SMEs care?

According to Pal, businesses should pay attention to the big-picture implications even before cost savings. With better integration, organizations will be able to more easily deploy software that simplifies communication-related processes and improves productivity.

"You can now build these applications that you couldn't build as easily before. In the past when you talked about VoIP you had to be a very sophisticated developer—you needed to know telecommunications before you could build an application," Pal says. "What we've done is we've made it easy so that any Web developer can mash up their own application for VoIP."

For example, a medical practice may have spent many man-hours having its office staff call patients to confirm appointments that are already in the practice's computer system. According to Pal, software such as LignUp's can more easily allow that already-existing information

VoIP Mobile Handset Products

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Netgear Skype WiFi Phone

www.netgear.com

This WiFi phone uses 802.11g technology and gives users the ability to call other Skype users around the world for free—without needing a computer to do it.

Nokia 6136 & Motorola A910

www.nokia.com

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Both of these GSM phones from the major manufacturers offer smooth transition between cell and Wi-Fi. Though there are no plans for a U.S. carrier to carry either yet, their development gives a taste for what the market may soon offer in North America.

TABLETmedia iFon

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to be translated into automated phone calls. Similarly, a large organization could use the automation to better keep in touch with employees. If employees are using VoIP-enabled mobile technology, this is where the cost-saving kicks in.

"If it is a VoIP phone, really what that means is that it is going over a VoIP network all the way to the end, so it is effectively free," Pal says. "You don't have to go to the PSTN [public switched telephone network] and pay toll charges. So, the advantage to being a VoIP phone or a SIP client on a cell phone is that you're using that data channel."

This can mean incredible cost-savings for a highly distributed global company that would otherwise pay through the nose in international telecommunications.

End-User Technology

While there are plenty of developments needed before mobile VoIP technology is the norm, it is becoming mature enough to support end-user technology. The reason being that while we wait for cellular

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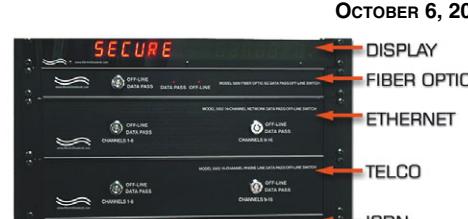


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Wireless Nation

Continued from Page 1

become more savvy about the capabilities they're looking for and the best ways to implement them for full integration with the rest of their technology."

Investment in a wireless site survey by a consultant or vendor can be useful, as well as chatting with several service providers to

In talking with service providers, SMEs should also discuss the data applications that might be routed over a wireless network. Each application has its own bandwidth requirements, and some might cause a network bottleneck if accessed from numerous points simultaneously. A good service provider can recommend bandwidth-shaping options,

"Many times, the cost of devices comes out of a department budget, so IT has to look at those numbers as part of the overall wireless costs."

-MobileAccess' Jeff Kunst

which can prevent underprovisioning as well as budget-breaking overprovisioning.

Wireless Concerns

One of the largest issues to address when choosing a wireless strategy for a company is security because locking down a wireless network often requires more attention and management than securing a wire-bound system. (For more specifics, see "The Wireless Security Update" on page 9.)

Another concern could be buying wireless technology today that is destined for the tech junk closet within a few years. To allay this anxiety, an IT department should talk with vendors about products that are backward compatible, as well as suitable for a scale-up in operations if a company should grow.

While choosing network gear and making sure that applications can run properly, IT departments will also have to look at what type of devices will be used in the company. Many times, it's more effective to pull together device makers and other vendors to create a customized service, says Morgan.

Wireless Essentials

- Service and support agreement with wireless carrier or partnership with device, software, and implementation partners
- A security policy that outlines access, usage, and IT roles
- Devices or laptops that can access the wireless network
- Proper amount of cabling
- Wireless site survey to determine suitability
- Wireless access points

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"The preference to work directly with wireless carriers for small business services has decreased from 45% in 2004 to just 18% in 2006," he notes. "While wireless carriers remain a viable option to consider for end-to-end service, the range of implementation partners now includes device vendors, software vendors, and solution providers because they have both the technology and service expertise to help meet your specific needs."

Another potential problem spot is wiring, notes Jeff Kunst, vice president of marketing for wireless firm MobileAccess (www.mobileaccess.com). "Ironically, it takes a lot of wiring to make a building wireless," he says. "Many companies, especially SMEs, don't realize how expensive cabling can be if they don't have the infrastructure in place, and they don't anticipate that when budgeting."

Finally, check in with the neighbors, advises Richard Rushing, chief security officer at AirDefense (www.airdefense.net), a maker of enterprise wireless LAN security products.

"Find out what the buildings around you are doing or whether companies on other floors have wireless that might be on the channel you planned to use," he says. "Some people only find out about other wireless setups when they're not getting any throughput."

Gauging Success

Once a wireless plan is rolled out and security is in place, the work toward tweaking a strategy doesn't end. As employees come in with support issues and network glitches crop up, an IT department will be able to see whether they're meeting their goals with wireless or falling short.

It is possible that SMEs might find that the wireless plan is too ambitious, or there are areas where it simply doesn't make sense. In some companies, wireless doesn't need to be on every floor or even branch office of the business. As much as wireless can be a boon when it comes to productivity, in some cases

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employees are simply desk-bound and don't need to access the Internet from devices.

In gauging the effect of the rollout, it's necessary to check in with other departments to determine productivity gains, says Kunst, and particularly to evaluate ROI.

"Many times, the cost of devices comes out of a department budget, so IT has to look at those numbers as part of the overall wireless costs," he says. P

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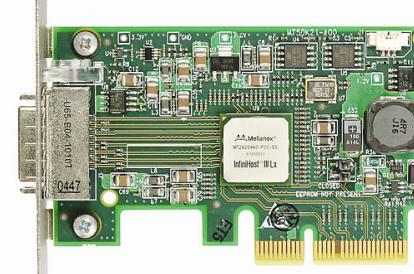


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VoIP On The Move

Continued from Page 11

offerings, technologists are taking advantages of the widespread availability of Wi-Fi, combined with cellular coverage, to optimize mobile telecommunications' availability and affordability.

According to a Forrester survey last year, half of North American enterprises are interested in dual-mode Wi-Fi-cellular phones. But many of these businesses are waiting now for VoWLAN headsets to come down in price and for better carrier infrastructure.

"There is great demand for dual-mode technology. Corporations are really looking at that for intracampus and intracompany applications," Pierce says. "If it turns out I've got a lot of people calling to and from cell phones when they are in the work building and I'm trying to control cellular expenses, that is a possibility."

Additionally, many companies are hoping to maximize their investments in IP PBX over recent years among those workers that may not be at their desks all of the time.

"It hardly makes sense for me to buy \$300 to \$500 SIP phones that'll sit on a desktop if 30% of my employees are literally mobile out and about in the wide world. It doesn't make sense for that part of my population, and it may not make sense for some other part of my population that is infrequently at their desks," Pierce says. "Then certainly dual-mode makes sense for them because you're trying to reach John, not John's desk. So it is a productivity issue."

Soft phone software such as applications developed by IP Blue and TABLETmedia for PDAs and mobile devices are hitting the market to great acclaim.

Wi-Fi phones styled after cell phones are being released at more reasonable prices—for example, Netgear's Skype WiFi phone is less than \$250 today. And cell phone manufacturers and carriers are working to release new dual-mode phones that utilize cellular and VoIP technology to get over coverage issues. Two of the newest models include the Nokia 6136 and the Motorola A910.

But perhaps most important is that drive for convergence that Pal speaks about. As manufacturers of all devices begin to layer multiple functions into smaller devices—cell phones that store music, Wi-Fi-enabled iPods, and more—adding VoIP functionality will be a no-brainer. □

How Big Of An IT Staff Do You Need?

Continued from Page 1

periods could be certain times of the day, times of the month, or times of the year.

While contract staffing is seeing gains in large enterprises, the gains for contract staffing in the small business market are minimal. While contract staff offer you the option to augment your staff for busy periods, working through a third-party staffing agency means the added expense of a 40% (and potentially higher) markup.

If you are considering supply and demand as a staffing methodology, it's important to note that it can be equal parts project management and budgeting. You can apply supply and demand with your existing staffing only. However, you need to be prepared to adjust work schedules and even put limits on when your staff can take vacation. If you are considering hiring contractors or part-time staff, you need to review your budget and related forecasting to ensure you can provide steady work for the additional workers you bring on.

When it comes to meeting supply and demand requirements through contractors, you need to also put in some vehicles for knowledge transfer, or you will watch corporate and project knowledge move onto another engagement and not be captured for your team's future reference.

ITIL

ITIL (Information Technology Infrastructure Library) is a set of internationally accepted best practices for services management. While the ITIL methodology doesn't have its own staffing guidelines, the problem management and incident management guidelines offer useful guidance for gauging staff size based on the realities of problem and incident management. Even if you aren't a strict follower of the ITIL methodology, you can still use the problem management and incident management guidelines to calibrate your staff size.

Scavo says, "Data centers are under tremendous pressure to reduce personnel and operating costs. Devoting more time

to problem management, including root cause and trend analysis, will reduce the number of incidents and the associated need for resources to resolve them. Working smarter, not just harder, is the key to optimizing operating costs in the data center."

Scavo continues, "But in focusing on these highly visible positions, IT managers are often missing the bigger picture." He says, "Help desk and technical support are just the tip of the iceberg when it comes to what the IT Infrastructure Library calls 'incident management' and 'problem management.' Incident management includes all activities that take place to restore services as quickly as possible in the event of a disruption, whether the disruption affects only a single user or is system-wide. Incident management includes nearly all the work of the help desk and second-level technical support."

According to Scavo, "In many data centers, incident management also occupies a large part of other jobs, such as console operators, production schedulers, system

programmers, system engineers, and even managers."

You may already be using incident management and problem management to drive staffing, meaning that ITIL incident management and problem management are a natural step to formalize and fine-tune your staffing approaches.

Activity-Based Costing

Activity-based costing is an accounting methodology that has its fans and detractors in the accounting and project management fields. Its basic premises are that activities consume resources, and the consumption of those resources drives costs.

Some accountants see activity-based costing as the more accurate cost management methodology with its focus on overhead costs and its treatment of indirect expenses as direct. With upwards of 30% of most IT budgets dedicated to labor and staffing, activity-based costing is going to paint a new picture of staffing costs relative to overhead costs.

Two of the accountants we spoke with for this article were quick to point out the added

overhead and complexity that activity-based costing introduces into the management and costing of projects, making it a less than ideal accounting tool for most small businesses unless they have significant in-house accounting resources.

Thus, for data center/IT managers who aren't developing or manufacturing products being sold to customers, activity-based costing probably isn't an appropriate staffing methodology. Depending on your accounting department, your data center/IT staff may or may not factor into your company's product development or services.

Activity-based costing is mainly for the large organization with well-defined accounting departments with subgroups handling accounts receivable, accounts payable, and project accounting.

Staffing Methodologies & The SME

When considering one of these staffing methodologies, it's important to realize the administrative overhead some of them bring to the table. It's also prudent to work closely with your accountant to see exactly where your data center staffing costs fit into your organization's overall budget. □

Weigh The Pros & Cons Of Staffing Methodologies

Methodology	Pluses	Minuses
Supply & Demand	<ul style="list-style-type: none"> Contract staffing allows flexibility in hiring Part-time staff typically doesn't have company-paid benefits 	<ul style="list-style-type: none"> Existing staff may resent changes in work schedules and prohibitions on vacation time Contract staff aren't typical in small to midsized enterprises Being overly dependent on contract staff Added vendor management costs Business and technology knowledge leaves at the end of contract cycle
ITIL	<ul style="list-style-type: none"> Incident and problem management are already part of the data center staff's job Focuses on optimizing job responsibilities 	<ul style="list-style-type: none"> Not an actual staffing methodology per se
Activity-Based Costing	<ul style="list-style-type: none"> Ideal when competing in stiff markets Most accurate cost management methodology Focuses on overhead costs 	<ul style="list-style-type: none"> Adds greater complexity and more accounting overhead Requires additional overhead tasks in project management and accounting

STORAGE

OCTOBER 13, 2006

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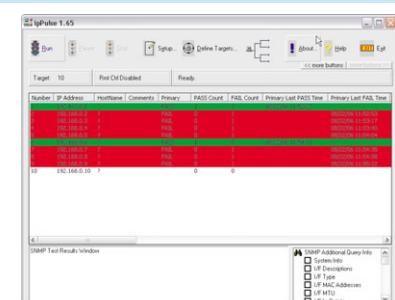
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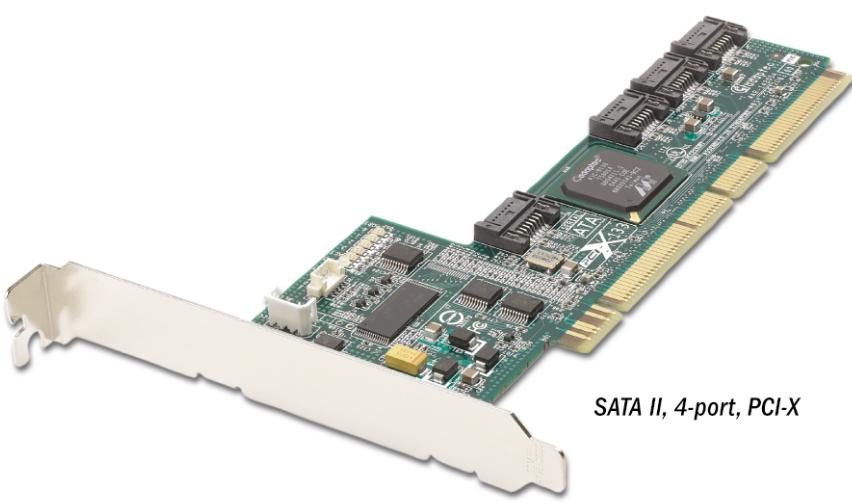
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Product Releases

PHYSICAL

Power Protection

■ **Emerson Network Power's** Liebert Power Assurance Package bundles a 1 to 10kVA Liebert GXT or PSI UPS with five-year, onsite service. It's a bid to help companies secure high reliability and network availability. The company touts the package as bringing data center reliability to compact UPSes.

■ **Tripp Lite** introduced the PS-415-HGULTRA, a medical-grade power strip with full UL 60601-1/60950-1 compliance for medical-grade power distribution and protection. The PS-415-HGULTRA features an internal site wiring fault protection circuit that prevents power to its outlets if the power strip detects a missing ground, reversed polarities, or an open line. The power strip also automatically restores power when it verifies that no line faults exist. The PS-415-HGULTRA includes four NEMA 5-15R hospital-grade receptacles and allows several pieces of electrical equipment to be operated from a single duplex outlet. The power strip features a rugged, all-metal case, a 15-foot AC power cord with NEMA 5-15P hospital-grade plug, a resettable circuit breaker, and a switchless design to prevent accidental shutdown.

Racks & Furniture

■ **Emerson Network Power** and **Knurr** have teamed up to deliver a line of racks and cabinets that offer integrated power and cooling features. The offerings feature Liebert cooling, power distribution, cabling monitoring, and control components, as well as an infinitely variable mounting system. Other features include slide nut support, door stiffeners, a highly perforated door panel for better cooling, and multiple fan-mounting options.

COMMUNICATIONS

Network & Systems Management

■ **Juniper Networks** unveiled the DX 3280 and DX 3680 acceleration and load balancing platforms for Web-enabled and IP-based business applications in data centers. The units also ship with version 5.2 of the DX operating system, which delivers improved security and server load balancing and provides a better ability to track application performance. Other features include ActiveN and High Availability. Available next year, the DX 3280 is expected to have a list price of \$24,995. The DX 3680 is currently available for \$49,995.

Juniper Networks also launched the WXC 590 WAN application acceleration platform, which is designed to accelerate application performance between local data centers and remote branches. The appliance

features swappable power supplies, hard drives, and fan trays. Juniper Networks also introduced the latest versions of its WX operating system (version 5.4) and WX Central Management System (version 5.4). The WXC 590 platform is currently available at a list price of \$24,995. The WXCMS 5.4 is currently available at a list price of \$5,795 (10-platform license).

■ **Silver Peak** released a WAN acceleration appliance. The NX-8500 is scalable and supports more than 100,000 TCP flows so multiple offices can connect to a single data center appliance. It also accelerates all application types and offers Silver Peak's Secure Content Architecture, which lets it secure policies without performance impact. It also supports WAN speeds of 500Mbps (800Mbps when it is optimized for network latency). It uses cross-flow payload compression and QoS techniques.

Routers

■ **ZyXEL** announced the MAX-200H and MAX-300, broadband gateway routers that combine WiMAX, Wi-Fi, VoIP, and security in a single product. Both products enable service providers to deliver secure last-mile wireless broadband access. The MAX-200H is an indoor router with firewall security, built-in Wi-Fi access, 4-port Ethernet switch, and VoIP capability. The MAX-300 is an outdoor version of the MAX-200H and is ideal for long-range communications because

it's designed for all weather conditions. The MAX-200H and MAX-300 are currently available for service provider testing.

Security

■ **Silver Peak** released the Secure Content Architecture, which offers end-to-end data security over WANs. It uses 128-bit IPsec (with AES encryption) secure transmission, SSL acceleration, disk encryption, and hardware acceleration. Secure Content Architecture offers centralized control by using peer authentication via its GMS (Global Management System) feature. It also uses TACACS+ and RADIUS and offers advanced application-based policy management.

Storage Networking

■ **Applied Micro Circuits** announced a SATA controller family. The 3ware 9650SE SATA II RAID controller lineup uses a native PCI Express x8 host connection and an I/O cache algorithm called StreamFusion to support up to 700MBps reads and 600MBps writes in RAID 6. Available configurations range from 2-port (low-profile) to 24-port (full height).

Switch

■ **Lantech** released Industrial Ethernet products with features the company claims are unique. Specifically, the industrial switches and media converters in IP30

Go to Page 17

Monitor & Measure Application Performance

NP-3000 NetSensory Appliance Helps You Keep Tabs On Your SME

by Joe Lazzaro

• • •

FOR NETWORK MANAGERS and application managers, fine-tuning your network and applications for maximum performance is an important job duty. But what are the bottlenecks slowing your system? Is it the network or applications that are to blame for slowing the wheels of progress? Quantifying network throughput and application performance can greatly assist IT staff in targeting bottlenecks to keep everything running at peak performance and prevent finger-pointing between

application and network managers. Companies are turning to solutions that boost communications between network and application managers and provide them with shared reference points to maximize application deliverables.

Network Physics' new NP-3000 NetSensory appliance provides network-wide application performance management and monitoring of key enterprise applications such as VoIP, database, SAP, Microsoft Exchange, Sharepoint, and other enterprise-level applications. The solution is a 2U, rack-mounted appliance with one- and

five-minute granularity, and it boasts 25% more performance than other appliances before it.

The appliance is installed via a SPAN/mirror port or tap, having no impact on the network, and provides more than 50 minute-by-minute performance and utilization metrics. The company recommends connecting the appliance to a point in your network that sees all your data traffic, typically the last switch before your Internet access routers. The appliance mines the information it needs for analysis by monitoring the standard TCP/IP information imbedded in every packet.

As with many contemporary solutions, the appliance is controlled using a Web-style interface and can be managed once

it's assigned an IP address on your network. In addition to the Web interface for management and reporting purposes, the appliance features a highly visual interface that uses graphical display elements to force patterns to the surface, allowing complex relationships to be understood at a glance. This allows managers to quickly drill down into problem areas without having to analyze tables of figures or other metrics.

According to Network Physics, competition for the Network Physics NP-3000 NetSensory Appliance comes from NetQos' NetQos Performance Center (www.netqos.com), Cisco NetFlow (www.cisco.com), and Network General Sniffer products (www.networkgeneral.com). □

SNAPSHOT

Network Physics NP-3000 NetSensory Appliance

Starts at \$39,995

Provides real-time performance management, business reporting, and application discovery

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SEPTEMBER 15, 2006



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OCTOBER 20, 2006



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MAY 19, 2006



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Product Releases

Continued from Page 16

enclosures can use AC adapters, automatically switch from 12V to 48V DC, shield their terminal blocks from water and dust in the bottom of the case, and automatically recover up to 20 switches in the ring in less than 300ms with the X-Ring feature.

Telephony

■ **Citel** released its SIP trunking voice platform Citel EXTender, which lets users employ a SIP trunking service provider to connect directly to a centralized PBX. The platform also eliminates the need for branch office local circuits. The suite consists of a PBX gateway I or II at the central PBX site and Citel EXTender 4100, 6000, IP6000, or 7000 at each remote site. The result is a unified dialing plan, a voicemail system, and system-wide call logging.

.....

■ **Palm** introduced the Palm Treo 680 smartphone, a GSM/GPRS/EDGE quad-band world phone. In the coming weeks and months, carriers around the world will announce additional product details, availability, and exact pricing. The Treo 680 has an internal antenna and a smaller form factor than its Treo predecessors in the United States. It also has a full, easy-type keyboard and a 320 x 320 color screen. The Treo 680 includes 64MB of user-available storage, nearly three times the memory of the original Treo 650. Customers can add up to 2GB of storage with expansion cards (sold

separately). In addition, the phone has built-in DUN (dial-up networking), which lets customers use the smartphone as a wireless modem for compatible Bluetooth-enabled laptops.

Video

■ **Asus** released a new series of graphics cards it's calling the EAX1950PRO line. The cards are based on ATI's Radeon X1950PRO GPU and include an advanced heatsink that Asus says lowers the cards' temperatures by 10 degrees Celsius in comparison to reference designs. The heatsink uses embedded heatpipes and a blower to move cool air toward the unit's fins. Additionally, the cards include the latest specifications to support Windows Vista OSes. The series includes the EAX1950PRO CrossFire/HTDP/256M and EAX1950PRO/HTDP/256M models. The cards are CrossFire compliant and include 256MB of DDR3 memory, a 581MHz engine clock, a 1.4GHz memory clock, and support for a maximum 2,048 x 1,536 resolution.

Wireless

■ **Anritsu** introduced Fixed WiMAX (802.16-2004) test options for its MT8222A BTS Master, a handheld field monitor for measuring WiMAX. The test options are for RF measurements and demodulation to expand analysis capability. With the Fixed WiMAX RF measurements option, the BTS Master measures the transmitted signal

strength and signal shape of a select BTS transmission. The Fixed WiMAX Demodulator option analyzes OFDM signals and displays detailed measurements for evaluating transmitter modulation performance. With a weight of 9 pounds, technicians can carry the BTS Master to field test WiMAX through preprogrammed Pass/Fail Modes.

.....

■ The XPress DR+ Wireless is a new DIN-Rail 802.11 device server from **Lantronix**. Designed tough for harsh environments, the XPress DR+ Wireless links industrial equipment to the Internet or LAN. A wireless unit like this is easier to deploy in factory and industrial settings than a wired device and facilitates remote management, event notification, and diagnostics.

END NODES

Data Collection

■ **Socket Communications** announced the SDSC 3M (Secure Digital Scan Card 3M) laser barcode scanner. The SDSC 3M features an SE-955 Class 1 Laser Scanner in the SDIO form factor. The SDSC 3M includes SocketScan, the keyboard emulation software that directs scanned data into any Windows Mobile or Palm application as virtual keystrokes. The Socket SDSC 3M supports Palm OS 4.1 or greater, Windows Mobile 2003/2003SE, and Windows Mobile 5.0. The Socket Secure Digital Scan Card 3M will be available this month with an MSRP of \$399.

KVM & Console Access

■ **Electro Standards Laboratories** introduced the Model 4875 Remotely Controllable KVM A/B Switch, which provides access to two systems from a single KVM set. The computers or servers connect to the A and B set of ports, and switching is performed through a button on the front panel or remotely using a contact closure that is attached to the RJ45 port. Three optional remote controls are available: the Model 4856 Single Channel Console Remote, the Model 4857 Dual Channel Console Remote, and the Model 4855 16-Channel Area Remote.

.....

■ **Lantronix** introduced the latest addition to its Lantronix Industrial Device Networking platform, the UDS1100-IAP single-port Device Server. The rugged device server was designed for harsh and extreme environments and supports standard communication protocols such as Modbus TCP, ASCII, RTU, and DF1, enabling it to work with other industrial equipment. The unit also has an integrated Web server, which lets users manage attached devices from any location that has Internet access.

Mobile

■ **Fujitsu** released three notebooks, including the LifeBook N6420, which includes an HD DVD player. The other models, both with 15.4-inch screens, include the LifeBook A3110 (starting at \$1,399) and

Go to Page 18

Dependable Storage Appliances

AMI Beef Up IP-SAN & NAS Offerings

by Ed Tittel

• • •

THOUGH PERHAPS BEST KNOWN for its PC BIOS firmware, AMI (American Megatrends, Inc.) is also carving out a significant niche at the lower end of the IP SAN marketplace with its iTX 2.6, a software upgrade for its well-known IP SAN and NAS product lines. This new version of the software supports block-based and file-based data transfers and lets its users enjoy the benefits of both IP SAN and NAS storage in a single product package.

StorTrends iTX 2.6 works with both 1TB and 2TB IP SAN and NAS storage appliances, as implemented in the company's StorTrends 1100i (IP SAN) and 1100n (NAS) 1U rackmount storage appliances. This compact unit includes redundant power supplies and supports sophisticated storage capabilities, including hardware RAID, SATA drive support with hot swap, and advanced snapshot and caching capabilities. The snapshot capabilities include redirect on write, up to 254 snapshots per volume (up to 992 per appliance fully populated with four SATA drives), snapshot scheduling for both SAN and NAS device operation, rollback from any snapshot, and the ability to delete any snapshot in an

existing sequence of snapshots (which the vendor calls "random snapshot deletion").

AMI also offers a larger enclosure, the 3100i (IP SAN) and 3100n (NAS), that accommodates up to 15 SATA drives in a 3U package. It also supports StorTrends iTX 2.6 in a dual-dialect software stack implementation for support of both block- and file-based data transfers. Storage capacity for this device tops out at 3.75TB or 7.5TB, along with synchronous, asynchronous, and snap-assisted volume replication capabilities.

AMI's primary competition includes low-end devices from major players such as Dell (Dell Storage Servers built on PowerEdge 2950 and 2900 models; www.dell.com) and IBM (TotalStorage DS300 and similar mod-

els; www.ibm.com), as well as more storage-oriented companies such as Buffalo Technologies (TeraStation; www.buffalotech.com), Adaptec (Snap Server 14000; www.adaptec.com), Iomega (StorCenter Pro; www.iomega.com), and so forth. As capacities increase, other well-known storage vendors such as EMC (Clarion; www.emc.com), Sun Microsystems (StorEdge; www.sun.com), Hitachi Data Systems (www.hds.com), and Network Appliance (FAS product line; www.netapp.com) come into play. With competitive pricing and aggressive features, AMI seems well-prepared to duke it out with these players. □

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AUGUST 4, 2005

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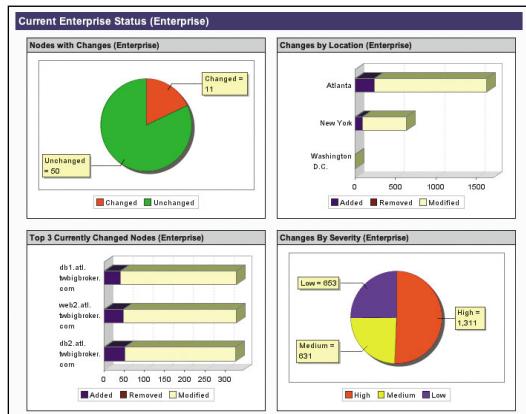
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Product Releases

Continued from Page 17

A6010 (starting at \$1,149). All three are Windows Vista Premium capable and offer Windows XP Media Center Edition 2005. The N6420 (starting at \$1,499) features a 17-inch Color Enhanced Crystal View display and new Visual Optimizer, which is an image processing subsystem that amplifies video from any source. The notebooks are powered by Intel Core 2 Duo or Dual Core AMD CPUs. The N6420 uses ATI's Mobility Radeon X1600 graphics with 512MB of HyperMemory and offers up to 400GB of storage.

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■ **Symbol Technologies** introduced a new WT4000 series of wearable mobile computer and scanner systems for use in extreme environments, such as warehouse and distribution centers, where users need hands-free operation. Users can wear the computers on a wrist or the hip. The series also offers headset support for voice picking. The WT4000 series has an IP-54 sealing rating, can withstand 4-foot drops to concrete, and can operate in a range of temperatures. Models support voice-only, text-only, and combination voice-text applications. Symbol says the series is also eligible for Service from the Start with Comprehensive Coverage, which reduces unforeseen expenses associated with accidental damage to the display, keypad, and other components, at no extra charge.

Monitors & Displays

■ **Asus** released a 22-inch widescreen LCD monitor that it has branded as the MW221U. The monitor includes wide-angle viewing; Trace Free technology, which accelerates gray-to-gray response time to 2ms; and a DVI input with HDCP support. Asus has also released a 20-inch monitor labeled as the MW201U. Both LCDs support a top 1,680 x 1,050 resolution, have a 700:1 contrast ratio, built-in speakers, headphone jack, and D-Sub and DVI-D inputs. Both monitors are available via Asus' Web site.

.....

■ **ViewSonic** announced six LCD monitors starting at \$249. A good display can increase a worker's comfort and productivity, so the overhauled VG Series offers 3.2 inches of height adjustment and 360 degrees of swivel. Ranging from 17 to 22 inches and coming in widescreen or 4:3 aspect ratios, the series features specific models with various attributes, such as a fast 5ms response time.

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Printer

■ **Kyocera Mita America** introduced three monochrome MFPs: the KM-5050, KM-4050, and KM-3050. The KM-3050 outputs up to 30ppm and has a maximum monthly volume of 100,000 pages and a drum life of up to 400,000 impressions. The KM-4050 outputs up to 40ppm with a maximum monthly volume of 150,000 pages and a drum that lasts up to 500,000 impressions. The KM-5050 provides users with a maximum monthly volume of 200,000 pages and a drum that yields 500,000 impressions. These MFPs support network and local authentication, HDD overwriting and encryption, PDF encryption and compression, IP filtering, and secure watermark. In addition, all three MFPs are compatible with iTag, Kyocera's document management solution.

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■ The new LDD120 Digital Duplicator from **Lanier** is a photocopier for organizations that need to print high volumes at a low cost per page. The LDD120 provides 130ppm speeds and 300 x 400dpi resolution. The copier automatically erases the centers and edges of books up to 11 x 17 inches for cleaner scans.

.....

■ **Océ** released the VarioPrint 2100 Titanium and VarioPrint 2110 Titanium printers, which offer low emissions. The 2100 is an entry-level printer. The 2110 offers 106 images per minute, oversized paper drawers, high-capacity stacking, and streaming PostScript. Both support PCL 6 and PDF 1.6 print driver languages. Users can print documents from DigiPath and FreeFlow Makeready programs via Océ DPLink software. The printers will be available next month.

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■ **Printronix** introduced the SLPA8000r, a barcode printer applicator and an evolution of the company's SLPA7000r print-encode-and-apply system, which was introduced in June 2004. The company says the SLPA8000r is the first model with the ability to upgrade to RFID labeling in the field and the industry's highest-speed RFID encoder, capable of more than 100 cases per minute. The SLPA8000r uses Printronix's MP2 Smart encoding technology, offering RFID implementation with Gen 2-certified hardware and interoperability with various Gen 2 tags while supporting EPC Class 0, Class 0+, 1, and Philips UCode 1.19 protocols. The SLPA8000r is now available in North America.

Your Data Center, Virtualized

Emulex Eases Setup & Management Of Virtual Systems

by Scott Koegler

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FROM VIRTUAL SERVERS to virtual storage, virtualization has become an important strategy for enterprise IT shops. The intersection of physical devices and virtual services is becoming a mainstay in the expansion of IT services. Emulex's LightPulse Virtual HBA and the AV150 Intelligent Storage Processor platform promise to make the work of setting up and managing virtual systems easier by allowing the use of standard tools on virtual devices so they can be treated as physical entities.

LightPulse is firmware that allows a single HBA to support multiple virtual storage segments. The upgrade will be a standard component of Emulex's 4GB HBA products, and customers already using the company's 4GB products can install LightPulse as a firmware update at no charge.

LightPulse allows virtual SANs to be mapped to virtual machines. With this kind of connection, administrators are able to share a pool of HBAs among a set of virtualized servers. SAN management tools native to each system can be used to manage the storage associated with that

Product Releases

Projector

■ **BenQ** expanded its digital projector line with the addition of the MP721, which includes 2,500-ANSI lumens brightness, a 2,000:1 contrast ratio, and support for a 1,024 x 768 resolution. In addition, the projector includes such adjustment options as picture modes in various input signals, a panel key lock, and presentation timer. An optional LinkPro wireless connectivity module is also available for wireless presentations. The projector also features an advanced cooling system that reduces the MP721's audible noise level to 24dB, or the level of a human whisper.

Storage

■ **Breeze Hill** and **UltraRAD** announced a backup, recovery, and archive appliance to meet data management and protection needs of small and medium-sized medical organizations. The appliance uses Breeze Hill's unified disk-to-disk-to-tape iStoRA backup and recovery appliance and UltraRAD's UltraARCHIVE software. With the iStoRA architecture, the appliance will have the speed of disk and the portability of tape to back up and archive removable media. The UltraARCHIVE software allows scalable levels of service on either a fee-per-terabyte-stored or fee-per-procedure basis. The combination will let medical organizations expand data loads and provide the power and capacity to recover data for regulatory compliance and disaster recovery purposes.

■ **Exabyte** says that its new StorageLoader LTO-2 is the first 1U, LTO-2 autoloading tape library. The StorageLoader supports up to eight tapes and stores up to 1.6TB native/3.2TB compressed. Prices start at \$3,400. Meanwhile, the company's new Magnum Tape Drive (LTO-2) offers fast storage of up to 200GB native/400GB compressed. Pricing for the Magnum starts at \$1,550 (internal) and \$1,890 (external).

■ There are three new virtual tape library products from **NetApp**. The new NearStore VTL300, VTL700, and VTL1400 offer low-cost, high-performance, disk-to-disk backup and recovery, the company says. NetApp says that it has doubled or tripled capacity through the use of compression, while simultaneously upping write performance by 50% more than its existing VTLs.

■ **Overland Storage** released its Ultamus RAID family of protected primary storage

appliances, which are aimed at small and medium-sized businesses, workgroups, and organizations with enterprise-level storage needs. Models in the series include the RAID 5200, which supports up to 52 SATA drives and 26TB of storage in one 4U chassis. The RAID 1200 model can house up to 12 SATA drives for 6TB of storage in each 2U rack-mountable enclosure. Both models feature support for standard RAID levels, multiple 4Gb Fibre Channel connections, DriveAlive technology for RAID rebuilds, and more. The 5200 is now available through Overland Storage partners. A release date for the 1200 hasn't been announced as of print time.

■ **Primera Technology** announced its Bravo SE Blu Disc Publisher. The Bravo SE Blu automates the process of burning and printing Blu-ray Discs. A robotic mechanism transports discs into the built-in Pioneer BDR-101A Blu-ray Disc/DVD Recorder. After recording, each Blu-ray Disc is individually inkjet printed in full color at up to 4,800dpi resolution. Up to 20 discs per job can be produced automatically and hands-free. The Bravo SE Blu connects via USB 2.0 to any PC running Windows 2000/XP. Bravo SE comes with PTPublisher SE duplication software, a complete, professional disc duplication solution that supports both Blu-ray Disc and DVD±R media. SureThing CD Labeler, Primera Edition, makes direct-to-disc labeling fast and easy.

■ **Rancho SysTech** released the RSI-SAS36EXP SAS expander. It has 36 SAS ports and can support up to 1,024 SAS devices. The 3Gb expander supports SAS and SATA I/II devices and is compliant with the ANSI SAS specification. It has nine MiniSAS connectors, and users can configure it via a RS-232 parallel port. The RSI-SAS36EXP is available for \$2,431.

■ **SimpleTech** released the Zeus SSD (Solid State Drive), which includes a Fibre Channel interface. The SSD supports temperatures from -40 to 85 degrees Celsius, as well as altitudes up to 80,000 feet. According to SimpleTech, the device has read/write seek times of 0.8/0.7ms, respectively. SimpleTech offers BasicPurge, RapidPurge, MilPurge, and intelligent Destructive Purge. The 80GB 3.5 Zeus SSD has a 400MBps duplex burst read and write speed, 5W power draw, and offers throughput higher than 70MBps.

Go to Page 20

machine, and that storage is segmented and secure rather than available as a shared resource among several servers. Virtualization of the HBA also allows for best utilization of each adapter. The virtual HBA technology complies with industry standard NPIV (N-Port ID Virtualization).

Emulex describes its AV150 platform as a first in the marketplace. The AV150 platform is an OEM product that is being incorporated into systems from companies such as McData and Cisco to move intelligent virtualization functions to the fabric from the host. This move has the potential to expand the capabilities of virtualization while reducing its management complexity.

Virtual fabrics such as Cisco's VSAN move intelligence from the host to the switch. This makes it possible to execute enhanced functions, such as nondisruptive data migration, data replication, heterogeneous volume management, and virtual tape libraries, within the fabric.

When the capabilities of the AV150 are combined with LightPulse 4GB HBAs, the virtual fabric can be extended further because individual HBAs are able to directly access multiple fabrics. This allows for

the creation of segmented storage domains within a single SAN fabric. The virtual SANs can each enable their own services appropriate to the needs of the storage application.



Emulex LightPulse & AV150 Platform

Extend the reality of virtualization by allowing virtual servers, SANs, and fabrics to perform as distinct physical entities

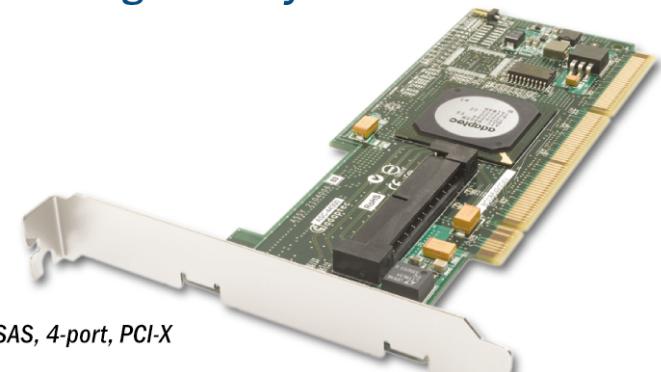
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Product Releases

Continued from Page 19

■ **Texas Memory Systems** has announced the RamSan-300, an entry-level SSD for SMEs that operates at 200,000 I/Os per second and includes Active Backup, IBM Chipkill, and Soft Error Scrubbing technologies. With RamSan-300, companies can support more concurrent users and transactions with the existing number of servers, as well as the existing memory. Furthermore, no new RAID configurations are required. The RamSan-300 can handle up to 1.5Gbps of bandwidth and includes 16 to 32GB of DDR. The latest RamSan firmware supports as many as 1,024 LUNs.

Workstation

■ **Eurocom** unveiled a line of EUROCOM All-in-One PCs designed to be energy-efficient and maximize desk space. The EUROCOM All-in-One systems come in 15- and 17-inch or 17-inch widescreen displays; use nontoxic, recyclable materials; and feature a customizable design that allows you to upgrade the processor, hard drive, memory, or optical drive. Customers also can enhance their monitors with an optional touchscreen or privacy filter. Eurocom estimates the first year's total cost of ownership for an All-in-One PC will be \$326 less than that of a desktop PC.

Components

■ **Addonics Technologies** has introduced a Snap-in SATA Mobile Rack, a removable hard drive system that lets users hot swap 3.5-inch SATA drives. The mobile rack installs in any 5.25-inch drive bay and is hot-swappable by ejecting the rack and inserting a new drive. Opening the Mobile Rack drive door automatically ejects a hard drive from the Snap-in SATA Mobile Rack. The rack includes isolated mounts for vibration and shock protection, as well as a fan at the front that provides airflow from front to back. The drive door includes a key lock for security and turning power on. The rack is priced at \$26.95. Other models include a rack with USB 2.0 interface (\$49.95), IDE interface (\$47.95), and LVD160 SCSI (\$129.95).

■ **D-Link** announced plans to launch end-to-end "Dongle-to-Hub" UWB (Ultra-Wideband) Wireless USB products based on solutions from Intel and NEC Electronics. Expected to ship in Q1 of next year, the D-Link UWB USB product line will support wireless peer-to-peer connectivity for plug-and-play data transfers between computers and USB peripheral devices. The line will feature an Intel HWA (Host Wire Adapter) Dongle and an NEC Electronics DWA (Device Wire Adapter)

Hub using UWB radio technology from Realtek. Intel's HWA Dongle features its Wireless UWB Link 1480 MAC (Media Access Controller) and its Windows-based Wireless USB driver, and the Realtek RTU7010 PHY (Physical layer). NEC Electronics' DWA Hub includes its μPD720180 wireless USB device MAC and its Windows-based DWA driver, along with the Realtek RTU7010.

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■ **TST** released the B410PT blade enclosure for applications requiring a high-density, self-contained unit. The B410PT features a pedestal ability to provide structural options for desk-side clusters or personal supercomputers and is optimally designed for thermals required by Intel's Dual/Quad-core Xeon 3000 series, Core 2 Duo, and Core 2 Quadro products. It supports Intel S3000PT Port Townsen server boards and one half-height 3.5-inch hard disk per blade. The B410PT has front access connectors for video, serial, two USB ports, and two LAN ports and front access Power and Reset switches.

SOFTWARE

Business Productivity

■ **AlertSite** has launched its DéjàClick tool, described as the first inside-the-browser transaction recording and playback tool. AlertSite says DéjàClick is also the only software application to use TrueUser monitoring, which the company describes as a true-to-life Web experience capturing the Web page content from the perspective of the desktop user. The tool automates the scripting process that is used to monitor Web transaction performance, allowing a user to record and monitor transactions almost immediately. DéjàClick, which is available as a Mozilla Firefox extension, also includes one-click Internet navigation, essentially letting it act as a "super bookmark." DéjàClick is available as a free download at www.dejaclick.com.

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■ **IBM** has introduced IBM Information Server, which lets users send data to applications and business processes. With IBM Information Server, the requested data is available and accessible when it is needed by operational data stores, data warehouses, or master data applications. IBM Information Server can also aid in incorporating grid computing and other modern technologies. The software will be available next month.

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■ **Tigerpaw Software** released Tigerpaw CRM+ version 10.5, which offers several new features. Service Order Escalation creates alerts for outstanding service issues based on such parameters as warning threshold, response time, or priority. The Time

Slips feature can create real-time snapshots and generate reports and is not attached to Service Orders. QuickSale offers keyboard shortcuts, rapid account call-up, barcode scanning, and other functions. Managed Services Integrator integrates with managed services software, including Level Platforms, N-able Technologies, and SilverBack Technologies, to provide automated service order generation, logging, archiving, and more.

Imaging & Printing

■ **Datamax** and **MCL Technologies** released 123 Print, a joint venture which creates printing applications that run directly on Datamax's label and ticket printers. The application lets users create labels, capture data input, and map printer functions on the fly without having to use a PC. 123 Print also includes debugging utilities, remote connection tools, and other automation features to help users take advantage of the PC-less system.

Datamax also announced the DMXNet Manager software, which allows users to manage local and remote Datamax label, tag, and ticket printers from a centralized location, as well as set up, configure, and update printers throughout the enterprise. Users can also remotely download firmware, fonts, graphics, labels, profiles, MCL printer applications, data-lookup files, and DPL (Datamax Printer Language) files using the DMXNet Manager software.

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■ **Frogmore Computer Services** has launched Print Distributor 4.0, a program that aids in printing management. Print Distributor 4.0 provides tools for distributing, emailing, and archiving documents. Among the new features in this version are Load Balancing, Acrobat Integration, and Conditional Printing. Print Distributor 4.0 is compatible with Windows NT/2000/XP/Server 2003 and costs \$149, with a 30-day trial version also available.

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■ **Kofax** has released its Document Scan Server for general availability. The scan server lets organizations add scanning abilities to an enterprise business application without adding additional software and without disrupting business processes. Major features of the scan server include an SDK (Software Development Kit), a desktop appliance, and a centralized Management Console. The SDK uses Services Oriented Architecture to allow developers to integrate scanning into a new or existing application using any OS or programming language. Kofax says it created the Document Scan Server to meet the growing needs for organizations to digitally capture documents at the point of entry in business processes.

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■ **LaCie** announced a complete burning and LightScribe Direct Disc Labeling solution for all operating systems, including the first-ever LightScribe Labeler software for Linux, a new version of LightScribe Labeler software for Mac, and SureThing LightScribe Labeler for Windows. LightScribe technology gives consumers the ability to burn labels onto LightScribe-enabled CDs or DVDs in the drive without any special printing supplies. LaCie LightScribe Labeler for Mac supports printing the same project on multiple drives simultaneously. Users can daisy-chain up to 999 units together to create a duplicator-like effect and print hundreds of professional-looking discs.

Network & Systems Management

■ **AdventNet** has introduced QIM (QEngine Issue Manager) 4 for tracking software bugs. QIM 4 is Web-based software that detects, tracks, and manages bugs. It includes project management, improvement, defect, and task management tools, as well as tools for workflow resolution, worklog management, time tracking, and rule management. Bug tracking is provided through role-based access control, attachment handling, schedule management, and automatic email alerts. QIM 4 also provides active directory authentication, screenshot attachment, and reporting tools. Pricing starts at \$195 for configuring a five-user pack with an annual subscription. Additional, larger user packs are available, as well as a free edition for small businesses.

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■ **BMC Software** released Mainframe Discovery Tools, which will help companies discover mainframe assets and then integrate them into BMC CMDBs (Configuration Management Databases). According to BMC, the software delivers improved data availability, quicker information access, real-time information provisioning, and improved ROI.

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■ **MetaSolv Software** released MetaSolv Provisioning 6, an order change management program which automatically assesses order changes and manages and executes the compensation plan to order completion. MetaSolv designed the software to manage the order changes with little or no intervention on the part of users. Provisioning 6 can automatically remove invalid service provisioning steps and recalculate and reprocess the order.

Security

■ **Breach Security** unveiled an updated version of its ModSecurity open-source Web application firewall. Version 2.0 is ideal for Web application monitoring, detecting and halting Web intrusions, and on-the-fly patching of existing susceptibilities. Features of the latest release include session

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Network & Systems Mgmt.

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AUGUST 11, 2006



Tripwire Enterprise monitors and detects change across the IT service stack, providing an essential detective control for passing IT audits and enforcing change management.

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- Reduce downtime and unplanned work
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ManageEngine NetFlow Analyzer 5.5 EA (Early Access)

Web-Based Simple Bandwidth Monitoring Tool

NetFlow Analyzer 5.5 uses Cisco NetFlow data exported from routing devices to analyze network traffic and report on bandwidth usage across the network. With instant real-time bandwidth usage reports on top applications, conversations, and hosts using bandwidth; NetFlow Analyzer gives valuable insight into bandwidth usage in your enterprise without the complexity and expense involved in deploying hardware/software probes.

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Product Releases

Continued from Page 20

management, events correlation, XML content analysis, and an enhanced analysis engine. Breach Security also launched the network-based ModSecurity Console for managing logs and alerts from up to three remote ModSecurity sensors. In addition, Breach Security's Core Rules offering is designed to ease deployment and help users quickly secure Web apps. ModSecurity's latest offerings are available for download at no cost.

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■ **Cisco** introduced the latest iteration of the Cisco Secure Services Client, a wired and wireless network authentication platform designed to meet the security needs of medium-sized to large businesses. Cisco Secure Services Client 4.0 is compatible with Cisco Secure Access Control Server and Cisco Self Defending Network via

Network Admission Control. The offering also supports most EAP protocols, WEP, Dynamic WEP (802.1X), TKIP, AES, and industry standards such as WPA and WPA2 in personal and enterprise modes.

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■ **Cyber-Ark Software** released EPV (Enterprise Password Vault) 4.0, which offers ICSA-validated security. Version 4.0's new features include a move to a full Web-based application, a search engine for finding privileged passwords and files, a wizard for defining privileged passwords, and a self-learning feature that can create lists of frequently and recently used passwords. Cyber-Ark points out it can support network devices, security appliances, databases, and operating systems, including IBM AIX, HP/UX, Microsoft Windows 2000/Server 2003, Red Hat, and others.

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■ **Ingrian Networks** has released the Ingrian Teradata Connector for moving cryptographic features from Teradata databases to Ingrian's network-based DataSecure hardware appliances. Teradata Connector is compatible with Teradata Warehouse 8.1 for Ingrian DataSecure Platforms. Teradata Connector provides granular, field-level encryption, as well as centralized FIPS-compliant key management, authentication, authorization, logging, and auditing. Teradata Connector pricing starts at \$19,000 and releases that support Oracle 8i/9i/10g, IBM DB2, and Microsoft SQL Server are also available.

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■ **Tablus** released Content Sentinel 2, which helps businesses determine whether they are compliant with data protection standards. It also has a Risk Trends feature that allows executives to measure overall

corporate compliance over time. The Top Risk Snapshot is new and prioritizes remediation activities. The software can quarantine or delete noncompliant data and also has policy-controlled network scanning that lets it locate sensitive information. The Content Sentinel 2 starts at \$9,995.

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■ **Trend Micro** announced the InterScan Messaging Security Appliance, software and services to protect against email-based threats. The InterScan Messaging Security Appliance protects email security on either software or an appliance and can assist with corporate governance and prevent confidential information loss. Trend Micro Network Reputation Services is also used to stop mail-based threats before they reach the gateway by verifying the IP addresses of incoming email. The Interscan

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Teaming Up To Reduce Risk

WebSense & Crossbeam Collaborate On WebBlazer

by Sandra Kay Miller

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RESEARCH FIRM IDC suggests organizations "develop and deploy holistic, integrated 'security ecosystems'" to remain agile in a continuously evolving threat environment. To meet this challenge, Websense and Crossbeam Systems have introduced the WebBlazer Web Threat Management System, which stacks the Websense Content Gateway Web proxy and caching technologies on Crossbeam's C25 UTM (Unified Threat Management) platform.

According to Crossbeam's co-founder and Vice President of Marketing Throop Wilder, "More and more security companies are coming to market on appliances for the supposed reason of 'ease of use.'"

Unfortunately, that mentality has rapidly evolved into a glut of best-of-breed boxes adding to the complexity of an IT manager's job because each device is managed independently. Wilder says this can lead to vulnerabilities due to the lack of visibility into the OS-level patches that may or may not be applied.

According to Wilder, pairing Websense with Crossbeam was a wise decision compared to Websense attempting to take the leap into the security appliance business. "Switching from software to the network security hardware business is often very difficult and requires a deep understanding of enterprise network topologies and deployments," says Wilder. Even more difficult is when customers demand hardware perfor-



SNAPSHOT

Websense & Crossbeam WebBlazer Web Threat Management System

\$24,995

Websense and Crossbeam offer comprehensive security and simplified administration through the integration of the Websense Content Gateway and Crossbeam's C25 Unified Threat Management platform

www.Processor.com/Websense2

mance features such as high availability, load balancing, and bandwidth optimization.

In addition to providing extensive control over enterprise Web content, the Websense WCG (Websense Content Gateway) Web proxy and cache adds an extra layer of protection from rapidly evolving Web-based threats such as worms, phishing, and spyware. This becomes even more critical as organizations move toward Web-based applications using a variety of new technologies such as SOA and XML, which traditional security products such as firewalls and IDS/IPS fail to protect.

For a fraction of WebBlazer's price, other content filtering and security companies' products, such as Secure Computing's Webwasher (www.securecomputing.com) and Symantec's newly released Mail Security 8300 Series appliance with integrated content filtering and security features (www.symantec.com), fail to offer anything close to single-box high availability using a telco-class switching fabric with support for networking, application, and control processing modules.

Combining the leading content security software of Websense with the horsepower of Crossbeam's enterprise-class UTM platform is a match that organizations faced with protecting large volumes of network traffic and data will embrace. □

Remotely Manage IT Equipment

Raritan Dominion XRO Helps Maintain Control

by Cindy Lazzaro

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GONE ARE THE DAYS of one monitor, keyboard, and mouse per PC. Also becoming impractical are the old-style KVM switches where each device had to be directly connected via a monitor, keyboard, and mouse port. Today's KVM switches require more flexibility and more fault tolerance, especially because some devices that need to be managed don't actually have connectors for monitors, keyboards, or mice.

To make remote management of a variety of devices easier, as well as provide fault-tolerant access and multiple paths for

device management, Raritan has introduced its new Dominion XRO turnkey product. The Dominion XRO enables remote management of standard servers, headless servers, LAN and WAN equipment, serially controlled power strips, and even PBX equipment and environmental control devices. It even comes with an embedded modem in case Internet access is compromised.

The Dominion XRO is available in six models that offer different choices in the number of ports available and the number of servers that can be managed, so companies can budget for their needs and add on as necessary. In general, the different models

support remote management of one to three servers and four to eight serial devices.

KVM-over-IP access is provided via Raritan's KX101 unit, and the Dominion SX provides Serial-over-IP access. The modem provides out-of-band access for emergency access. To add functionality and more efficient network management, the Dominion XRO works with Raritan's CommandCenter SecureGateway to provide a central view of a company's entire device architecture through a single IP address. For added security, communication is handled using SSH and SSL 128-bit encryption.

There are a number of competitors to the Raritan Dominion XRO; many are designed for large enterprises but also provide smaller add-ons for the branch office. One competitor is Sigma-IP,

whose Peppercon 0801IP/1601IP products come close to providing the same level of capability for the small to midsized enterprise or branch office (www.sigmaclosures.co.uk). However, unlike the Raritan solution that supports multiple platforms out of the box, Sigma-IP requires a connector to communicate with Sun and USB devices. Another competitor comes from Arica Technology, which provides a KVM switch with IP-to-serial device server capability and USB auto-sharing, as well as IP power management (www.allproducts.com/manufacture98/arica). However, unlike the diversified Raritan Dominion XRO product line, the Arica products are not as configurable, nor do they come with integrated management software. □

SNAPSHOT

Raritan Dominion XRO

Starts at \$1,700

Provides network administrators at small to midsized enterprises and branch offices the opportunity to remotely manage and view their LAN/WAN infrastructure

www.Processor.com/Raritan10

Product Releases

Continued from Page 21

Messaging Security Appliance then filters internal gateway emails through heuristics, statistical analysis, signature filtering, whitelists, and blacklists.

■ **Verano** released Industrial Defender, software to monitor and provide security to real-time control environments through security layers of perimeter protection, gateway virus filtering, network intrusion detection, host intrusion detection, SNMP device monitoring, and security event management. Industrial Defender was designed specifically for power transmission and distribution, water distribution and treatment, gas and liquid pipelines, mass transit systems, and power generation companies. The layers of security protect against cyber attacks and help ensure levels of availability through critical metrics and network monitoring.

Storage

■ **Acronis** has launched Acronis True Image 10.0 Home, which provides storage tools and protection for home offices, small businesses, or branch offices. True Image Home includes functions for creating file and disk image backups and provides data restoration tools. In addition to creating disk image backups, Version 10 adds the ability to back up individual files, entire applications, and data in email. The new version can also perform backups of an entire Microsoft Outlook or Outlook Express installation, including not only the application but also calendars, contacts, tasks, email rules, and other Outlook or Outlook Express data. With Acronis True Image, users can create rules and policies for backups, and the software also provides password protection for mobile devices.

....

■ **EMC** announced the latest version of its Retrospect Express HD backup and archiving application. Version 2.0 features network drive support, an automated scheduler, file or PC restore capabilities, automated deletion of outdated backups, and in-use file protection while the backup process executes.

■ **EVault** released the latest versions of its disk-to-disk backup and recovery software, InfoStage, and its storage-related, Web-based reporting software, Reports. Customers can subscribe to EVault Protect, its online service, or they can buy licenses for the software. EVault InfoStage protects IBM AIX, HP-UX, Linux, Windows, Novell NetWare, Oracle databases, Sun Solaris, and more.

■ **NTP Software** released QFS For NAS Storage Firewall 3.2, which handles up to 15,000 I/Os per second and includes Smart Migration, as well as Self Service Storage. QFS For NAS 3.2 starts at \$6,995, and NTP licenses the software per storage host.

■ **QStar Technologies** launched QStar HSM-Lite, archive management software designed to address the archive and regulatory needs of small and medium-sized enterprises required to meet industry compliance. QStar HSM uses high-speed storage devices, such as disk arrays, as a cache and automatically moves data to less-expensive, slower, removable storage devices, such as optical discs and magnetic tape drives. HSM manages the enterprise's data on slower devices and then copies data to faster disk drives when needed. HSM-Lite supports up to two libraries from a single server and up to four volume sets with a single license. The hard disk cache is limit-

ed to 10GB per volume set. HSM-Lite is available in 16 operating systems, including Windows NT/2000/2003/XP, Solaris 9 and 10, HP-UX, AIX, RedHat, Debian, Fedora, Mandrake, Gentoo, and a number of legacy operating systems.

QStar also announced QStar CD/DVD Master, an offering that lets businesses manage large pools of data through a seamless tiered storage management structure, supporting CD and DVD library management. QStar CD/DVD Master uses high-speed storage devices, such as disk arrays, as a cache and automatically moves data to removable CD and DVD drives. QStar CD/DVD Master comes in three levels. Master-1 combines the ability to create and manage CDs and DVDs in either ISO 9660 or UDF formats. Master-2 includes media spanning capabilities, allowing the user to create file sets larger than a single piece of media, while still maintaining a nonproprietary UDF format. Master-3 allows customers to ensure all data is securely written with QStar's DVD Image Proxy writing feature. All versions of QStar CD/DVD Master are available in 16 operating system options, including Windows NT/2000/XP/2003, Solaris 9 and 10, HP-UX, AIX, RedHat, Fedora, Mandrake, and more.

Telephony

■ **Sprint Nextel, QUALCOMM, and Lucent Technologies** announced an agreement to develop software and infrastructure for push-to-talk services. Lucent Technologies will enable QUALCOMM's QChat push-to-talk services throughout Sprint's CMBA2000 1xEV-DO Revision A network. The walkie-talkie services will feature a call setup latency of less than one second between handsets. Sprint expects to offer the

push-to-talk services in early 2008, and the high-performance mobile broadband network will also allow for high-speed video telephony, music-on-demand, video messaging, and large file uploads.

SERVICES

Business Productivity

■ **iPass** has introduced Virtual Office, which provides GoRemote managed broadband with iPass' remote access in order to create more flexible workflow, allowing users to work from home, the office, or on the road. iPass' service now supports both managed home connections and corporate Wi-Fi networks. iPass Virtual Office includes a large virtual network with more than 62,000 hotspots around the world, fixed broadband access across North America, and dial-up in more than 160 countries. It also includes the iPassConnect universal client, through which all connections are made; the iPass Portal for configurations, quality monitoring, providing support, offering training, and performing billing procedures; and iPass Professional Services for support.

Security

■ **iPass** has introduced iPass Device Lockdown to protect remote systems and mobile devices and to enforce compliance policies. This service provides automatic scanning and updating before Internet access is granted to a remote or mobile device. iPass Device Lockdown only allows iPass Policy Servers to access the Internet during bootup. This way, network devices are protected while waiting for software updates and patches to be downloaded and installed. iPass Device Lockdown will be available sometime this fall.



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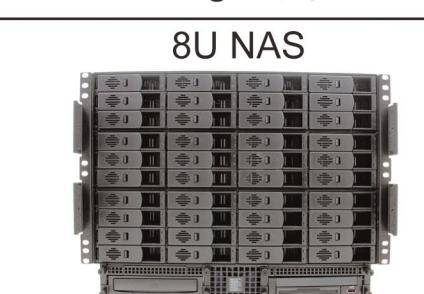
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OPINIONS

DATA • DEVELOPMENTS

Microsoft Delivers More Power To Visual Basic Developers

At the last Visual Basic SDR (software design review), the folks from Microsoft showed us a lot of new technology, and they've released one of these innovations (at long last). Ah, yes. There are far more of these "innovations" that we haven't seen yet and perhaps never will—and that might be a good thing. These SDRs are a way for Microsoft to test the waters to see if its new ideas float.

This latest set of tools was built by a (very) small group of developers at Microsoft with very little funding but a great deal of enthusiastic support from me and the other pundits in the meeting. I'm referring to the Visual Basic 2005 Power Packs. I put a link to their site (where they can be downloaded for free) on my Web site (betav.com). There are only two power packs at this point: the Microsoft Interop Forms Toolkit 1.0 and the Microsoft PrintForm Component 1.0. The site also has a link to let developers vote on additional power packs. In a minute I'm going to take a brief look at these two new toolkits, but before I do I want to applaud Microsoft for including these "customer satisfaction" components in its busy schedule.

Based on a number of interviews I've had with Microsoft insiders, the Visual Studio team has been prevented from implementing more of this type of code because its attention has been focused on other flashier, shinier tools like QLINK, DLINK, and XLINK, as well as the new EDM technology. Apparently, there's only

so much money, time, and enthusiasm for maintaining the existing products when there are so many new things to work on.

During the SDR, many of us made it clear we thought Microsoft should be refocusing on some pretty fundamental aspects of Visual Studio, Visual Basic .NET, and C# functionality—and not so much on adding more complexity to the developer's toolbox or the languages. We just wanted Microsoft to fix the bugs and inconsistencies in the development tools, wizards, and object namespaces already in our overflowing bag of software smithing tools.

Linking To .NET From Legacy Visual Basic 6.0

The Microsoft Interop Forms Toolkit (1.0), aka MIFT, is designed not for Visual Basic .NET but for Visual Basic 6.0 applications that need to get to newer .NET technology. Peter Blackburn, my friend and co-author who works out of the UK, has a customer that's struggling with an existing and very large Visual Basic 6.0 application. For a litany of good reasons, the company (like so many others) cannot afford to migrate to Visual Basic .NET or even SQL Server 2005.

Any IT manager or well-informed developer can list

these reasons, but he would run out of fingers and toes counting them. Anyway, the MIFT is designed to let Visual Basic 6.0 developers like Peter's customer access Visual Basic .NET Windows Forms from an existing Visual Basic 6.0 application. This would help the developer create a phased conversion of an existing legacy application as he migrates one form at a time. The idea here is to simplify the process of migrating to .NET for Visual Basic 6.0 developers.

Printing From Visual Basic .NET—Finally

One feature pushed off the bus late in the Visual Studio development process and left along the road was the ability to print from a Visual Basic .NET application. While Visual Basic 6.0 permitted developers to create and print reports, this is especially tough in Visual Basic .NET unless you have a Ph.D. in .NET. The Microsoft PrintForm Component 1.0 brings back (enables for the first time) the ability to print a Windows Form.



WILLIAM (BILL) VAUGHN

AUTHOR William (Bill) Vaughn is an industry-recognized author, mentor, and subject-matter expert with more than 30 years in the computing industry as a developer, manager, trainer, marketer, and writer. After 14 years at Microsoft, Vaughn stepped away to work on his new books, in addition to mentoring and leading training seminars. He's written six editions of the "Hitchhiker's Guide to Visual Basic and SQL Server" and two editions of "ADO.NET and ADO Examples and Best Practices for Visual Basic Programmers." He and Peter Blackburn just finished "Hitchhiker's Guide to SQL Server 2000 Reporting Services."

Cool. Unfortunately, many of you have spent considerable time and developer brain cells trying to get this to work on your own.

Where Do These Packs Make Sense?

OK, these might seem like pretty focused tools and only for Visual Basic developers and also predominantly focused on Windows Forms. That's right; the C# developers don't really get anything out of this. And what about ASP developers? I just got a chart from Dundas (which makes a set of cool graphic controls for Reporting Services, Windows Forms, and ASP.NET applications). It showed the number of developers building Windows Forms had risen dramatically over the last two years. While about 57% of the applications being built were ASP.NET, about 35% were building Windows Forms, and the ratio of those using Visual Studio 2005 shows Windows Forms was seeing a new resurgence.

I can't tell you how many times I've interviewed customers and consultants who spent countless months trying to build an ASP application using a Windows Form specification. For some reason (you probably know the answer), IT decision makers feel they need to get onboard with .NET but misunderstand they have several alternatives, including Windows Forms. I would like to thank Microsoft for listening and implementing tools that everyday developers can use to make faster code faster.

Send your comments to bill@processor.com

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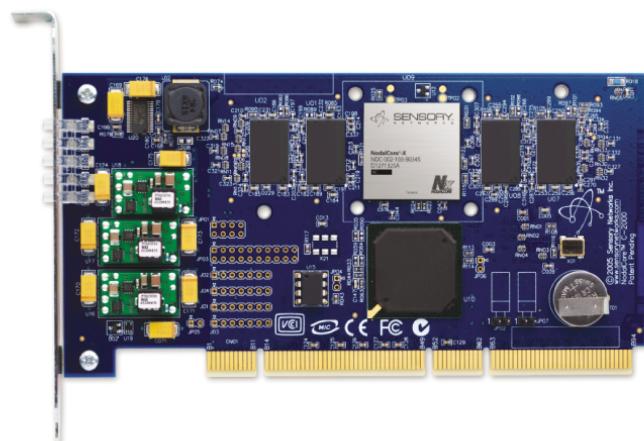
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OPINIONS

INFRASTRUCTURE

Hostbusters!

Working in technology, there are not that many things that make me feel innately human anymore. But, ironically, the one area that grounds me in the supreme creativity of the human mind is the miscreants. They astound me with new ways to perform their evil deeds through little more than social engineering.

Perhaps the most devious are the scammers because often they are not targeting your data, but your customers and your reputation. When someone is attacking you directly, you have several counter measures. But scammers who try to capitalize on your good image by using it in their own campaigns, or attempt to defame your image through more slanderous means, are far more difficult to deal with. They can engineer a sad story or phony Web site with misleading information that never passes through your turf. So who do you call when there's something strange in your electronic neighborhood? If only there were "Hostbusters" that could make it all go away!

Parapsychic Investigators

The real answer is: It depends on what type of issue you are facing, but there are a few general practices that you should establish in advance that are applicable to all situations. You need to make sure you are getting all the information available. Are you dealing with a simple Slimer or a class 5 full-roaming vapor? You need to empower employees at all levels to report anything suspicious, provide them a formal reporting procedure, and clearly define who makes

decisions on disclosure to other users, customers, and legal authorities.

I also strongly recommend you find access to legal counsel. Many of these situations quickly delve deep into legal matters that are well beyond the expertise of packet pushers and application jockeys. After a crisis breaks out is not the time to start shopping for an attorney.

"Listen . . . Do You Smell Something?"

One of the more common scams that I have dealt with is copycat Web sites created to mislead users. These situations must be addressed directly with the hosting entity, but understand that help desk employees are accustomed to answering questions on connectivity and billing—not fraud. So you will probably get referred to a legal department that won't call you back for a few days. One tip: Judicious use of scary words like "criminal" and "the authorities" may get you to someone with the authority to shut the copycat site down more quickly.

Of course, the first trick is to determine who the hosting entity is. A Whois utility (for example, www.whois.net) is a great tool, but querying the domain name alone will only tell you who registered the domain and who the name servers are. That is not necessarily the same as who is hosting the site. Thus, you either need to dig

through the DNS records at the authoritative name servers or ping the Web site and use Whois to track down to whom the address space is allocated.

I prefer the latter because the addresses queried are seldom direct allocations from IANA's (Internet Assigned Numbers Authority) local, national, or regional

MICHAEL DEMPSEY

AUTHOR Michael Dempsey is the information technology manager of Sandhills Publishing and technical editor of Processor magazine. He has more than a decade of experience in voice and data communications and holds current CCNP and CCDP certifications. Dempsey is an expert in network security, virtual private networks, and IT infrastructure.



Internet registries. The more suballocations involved, the more places you have to state your case. If you do not get an adequate response from the direct allocation, appeal to the upstream provider.

Sta-Puft Marshmallows

Copyright infringement claims is another path you can take with the hosting company. If you owned the copyright for Sta-Puft, you would probably take issue with your marshmallow man mascot being portrayed as an agent of Gozer. Infringement claims are notoriously tedious, due to the volume of DMCA (Digital Millennium Copyright Act) piracy cases, but that is precisely why this method can work. Hosting entities already have a defined practice for this type of complaint. (For domestic claims you will

need your copyright registration numbers as filed with the U.S. Patent and Trademark Office [www.uspto.gov.])

About the only true technical defenses you have are if the scammers are pulling some of their content directly from your online presence. Scammers who are trying to pass themselves off as you will often simply load portions of your site in their site. Have your Web developers check framesets and referring URLs and accordingly block or redirect these requests.

Last but not least, if the ISP is not cooperating, or worse, the ISP is the perpetrator, your only avenue may be to appeal to ICANN (Internet Corporation For Assigned Names and Numbers). ICANN provides a method

for arbitration, the Uniform Domain-Name Dispute-Resolution Policy (www.icann.org/udrp/udrp.htm), that might provide you an out. Be forewarned, however; the UDRP is a long and arduous process.

If you do find yourself wrapped up in one of these ghastly situations, don't lose heart; just remember my three keys to success. One, a little bit of planning and a healthy dose of persistence go a long way toward resolution. Two, don't be shy about pulling in some outside resources for help, like an attorney or an IT services firm that specializes in security matters. And three, just keep telling yourself . . . I ain't afraid of no "host"! □

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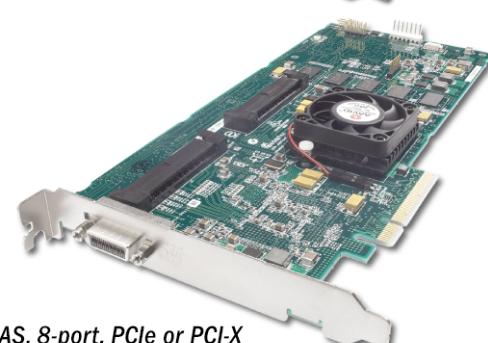
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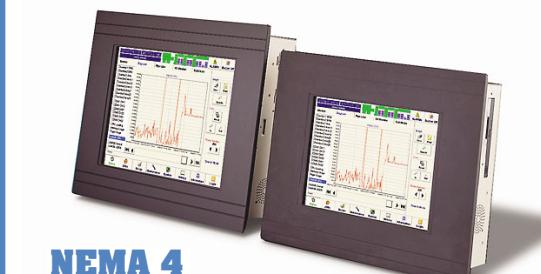
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Mashups & The Enterprise

The Latest Incarnation Involving Architectures & Creativity

by Robyn Weisman

• • •

THERE REALLY IS a Reese's Peanut Butter Cup parallel to the mashup, a concept that has come on the application radar in the last year. For example, someone thought to merge the Chicago crime database with Google Maps, and police and statisticians now are able to view the distribution of crime across the city, explains Ward Cunningham, who is credited with creating the wiki and is also the director of committer community development at Eclipse Foundation (www.eclipse.org).

"A mashup is a combination of two applications to produce some greater value," says Denis Pombriant, principal analyst at Beagle Research Group ([www.beaglerearch.com](http://www.beagleresearch.com))

and a well-known CRM guru. According to Pombriant, Google Maps has been the peanut butter in most of the first mashups available.

An effective CRM-related mashup combines Google Maps with a user's salesforce.com database. "It provides a map view of all pending appointments, so a salesperson can plan his or her route and/or strategy to take more effective actions," Pombriant says.

"But we're going to see people blowing through the Google Maps application for more serious application areas, [with people] bringing disparate applications delivered around the concept of the business practice. In the vendor community right now, mashups are relatively static, but there's nothing holding us back. There are 300 applications available for use in sales-

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force.com's AppExchange platform alone," Pombriant says. "For the business process you're going to see end-to-end BPA (business process application) support."

Within Reach

According to Cunningham, mashups are becoming a movement because as these first simple mashups became available, data providers responded by saying, "Oh, this is a good thing; let's make it easier [to accomplish]." As a result, says Cunningham, APIs are being published to facilitate the process.

To Cunningham's mind, the development of mashups demonstrates the same sort of innovation that the wiki brought about. "The source of creativity is outside myself," he says. "Wiki outsources content

Cunningham says two parts are needed to foster mashups: an architecture that supports creativity and then making the components of this architecture available so that such creativity has the opportunity to flourish. "That's the leap—our creativity and their creativity. We choose to share it," he says.

Mashups In The SME

On a big-picture level, mashups are an exciting example of what Web 2.0 has to offer. But how do they impact small and midsized enterprises on an immediate level? For Pombriant's part, mashups are important tools because SMEs, with their limited resources, need to find ways to optimize their time and resources and leverage their technologies in as many ways as they can.

IT managers need to become aware of what is available for mashup possibilities.

and the organization of that content, [all of which] is contributed by readers. It's a recognition that expertise may not be with experts—that, in fact, everyone is a little expert [because] they are assembling ideas, rather than programs, in English, or more precisely, in a natural language."

And technology supercharged the wiki movement, when great languages and frameworks combined with great data sets to produce a live expansive result. Cunningham sees mashups as the latest incarnation of this wisdom. "You take a modern Eclipse IDE (short for 'integrated development environment,' a general development environment for writing software code; the Eclipse IDE is a certain configuration of a Java development environment). We could have made it a single application. Instead, we build the components because if we build a great IDE, it enables others to put together their [own applications]," Cunningham says.

"Single tools do not do it anymore. You have more demanding customers, and the processes that historically have been done manually are ineffective," Pombriant says.

For example, "if you look at the lead-to-cash process, the hard thing is finding enough qualified leads. Traditionally, you see two approaches: cold calling, which is a ridiculous waste of time, and email marketing, which is hit or miss. Having your best salesperson cold-calling is an expensive use of his or her time," Pombriant says.

As a result, IT managers need to become aware of what is available for mashup possibilities, says Cunningham. Perhaps there is data inside the company or public data that may be leveraged, and the company is unsure how to reap the benefits or determine its natural value. While the initial instinct may be to hoard a company's information, Cunningham points out that doing so "ensures the value will not be discovered." □

Pointers For Putting Together Mashups

Ward Cunningham, director of committer community development at Eclipse Foundation, says that those looking to create mashups of applications need to keep a couple of pointers in mind.

First of all, the "masher" needs to make sure that the technologies being combined can be properly

enabled. They must have the right kind of modularity so that the pieces fit together properly.

Secondly, prospective mashers need to check the licensing policies of the applications they are mashing together. "The licensing needs to say in advance it's OK, and you need to read the terms very carefully," he says.



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Should You Colocate?

The Pros & Cons Of Renting Space

by David Garrett

LEASE OR BUY? You can ask it of homes, cars, even of servers and rack space. Colocation, in which you lease space in a data center designed expressly for that purpose, is a popular option that's growing by the week. Research firm Gartner predicts that demand for hosted and managed service firms will grow at roughly 15% in the next year, and not just from new accounts with small to midsized enterprises. Even large firms with large data centers can benefit from colocation for their Web sites, nonmission-critical apps, and offsite data storage.

When you colocate, you can determine the hardware and software you use—the servers, the brands, and their setup—or use a preconfigured option from your colocation provider, who takes care of all the upkeep.

The Pros & Cons

Why colocate? Cost, for one. Leasing space in a large, well-built data center is

cheaper than building your own. And if you have only a few racks or basic needs, the difference between leasing a few square feet in a colocation center and equipping even the smallest data closet can be dramatic.

You'll also get more for your money and more than you might afford in-house. Colocation centers have onsite personnel all day, every day, and most employees are well-trained and certified (or at least work under the supervision of certified engineers). Often, colocation providers' NOCs (network operating centers) sit in hardened buildings meant to withstand floods, storms, and even earthquakes—far more than can be said for the average glass-and-concrete office tower. Those NOCs can be Tier-4, SAS-70 certified. And they can be safe: Access control is tight and often state-of-the-art, with ingress and egress logs, biometrics, and video surveillance.

Worried about fire? Most colocation centers spend lavishly on fire-suppression systems, using the latest in server-safe systems. They boast redundant connections to major backbone providers, giving clients the bandwidth, speed, and peace of mind

they wouldn't get in-house. And because your racks can sit in a building across the nation or halfway around the world, problems with your local power grid won't affect them at all; if your network goes down, a colocation center in a different state won't.

Reasons such as these make colocation centers a prime choice for Web hosting, managed apps, offsite backup, and disaster recovery. But they're not perfect. "Touch is trust," to quote a phrase, and your equipment won't be under your direct control in a colocation center, which for all its benefits gives some hands-on engineers the jitters.

What To Look For

To stave off problems, look for colocation vendors that offer rock-solid SLAs (service level agreements) that you can tweak to your needs. SLAs guarantee service levels and uptime and offer vendors incentives—or even penalties—to keep their promise of uptime. Do they offer five nines? More? If they have to pay you for downtime, as many SLAs stipulate, you're less likely to suffer from service brownouts and other interruptions. (As with most things in business, there's no incentive like the almighty dollar.)

Be sure your SLA also specifies help desk response times and ticket routing through first-, second-, and third-tier engineers and lays out your access rights to your equipment. Can you enter the building at any time? Who, exactly, can enter, and how will they have to identify themselves to onsite security? Will you have your own access codes? Will your visit be supervised? The worst time to discover a glitch in access rules is when you need access the most—that is, in a disaster.

Apart from other commonsense basics, such as your vendor's equipment and its reputation with current clients (a decent colocation vendor will gladly provide you with contact names and numbers so you can check), it pays to do some digging. Check the vendor's credit record and financial status. It won't help you if it's on the cusp of bankruptcy or can't pay the cooling bill. And ask how its employees are screened. Reference checks are good; background checks are better.

Doug Bruhnke of DataPreserve (www.datapreserve.com), which offers an offsite backup service from megabytes to terabytes, also suggests that colocation users know where their data is stored, not to mention how safe it is. "One of the questions a small business should consider is, 'Is my data backed up there?'" says Bruhnke.

In fact, a number of DataPreserve's clients are colocation vendors themselves

because they can offer their own clients a second layer of data protection through offsite backups. That type of insurance can be vital; Bruhnke cites research from Gartner that says as many as half of all companies that lose their data for only a day, later shut their doors forever. (DataPreserve itself has two data centers, the first of which is in Arizona, a site it chose in part because it's far less likely to suffer the kind of disasters that have plagued Florida, California, and the Gulf Coast in the past few years.)

If your colocation vendor does not have offsite backup, don't worry. You can arrange for it yourself. "We do have customers who have equipment in colocation

If your colocation vendor does not have offsite backup, don't worry. You can arrange for it yourself.

facilities, and they back up from there," says Bruhnke, "with or without the cooperation of the colocation facility."

The Whole Package

Some hardware vendors also offer colocation options. That's the case with ASA Computers, which builds and then hosts servers to customers' specs, saving them money.

"I would look more to what it's going to cost me on a monthly basis than actually what it would cost me to buy the server because the server is a one-time deal," says ASA's Arvind Bhargava. The capital outlay, he notes, is not the biggest cost. Someone has to maintain the server over its useful life, and the aggregate cost of that maintenance quickly outstrips the initial price of the hardware.

It's one more way that colocation vendors can ease the budget pressures faced by SMEs. It's also a plus for companies that add hardware for a specific project. As Bhargava notes, a colocation center, especially one that sells hardware as well, can provision, maintain, and then clear away your equipment when the time comes, with nothing but a phone call to get things started.

Convenient? Certainly. But then, it's convenience that makes colocation attractive in the first place and could make it right for you. □

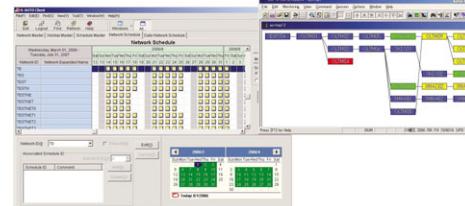
Colocation Providers

Company	Description	Web Site
ASA Computers	Offers colocation with a twist: It builds its own servers and then houses them for you, as a value-added service; in contrast, most colocation vendors offer you a set menu of servers or ask you to provide your own	www.asacomputers.com
bayMountain	A regional colocation provider based in Richmond, Va., with a satellite office in the Research Park Triangle area of North Carolina; in addition to a standard set of colocation options, it also offers compliance services for Sarbanes-Oxley	www.baymountain.com
Ensynch	Offers a range of solutions from mail bagging to managed security and disaster recovery; focuses on the midsized company and its colocation needs	www.ensynch.com
Rackspace	Offers everything from single-server setups to advanced, multiserver configurations and claims 100% uptime or partial refunds of its fee	www.rackspace.com
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The Eyes Of IT Watching Over You

Video Surveillance Tips For IT Departments

by Douglas Schweitzer, Sc.D.

IN A SURVEY CONDUCTED last year by the American Management Association and The ePolicy Institute, the organizations discovered that more than 50% of the companies surveyed use some type of video monitoring apparatus. One interesting aspect of the survey was that the number had increased substantially over the past four years (to 51%, up from 33% in 2001).

No doubt the horrific events of Sept. 11, 2001, have moved security to the forefront at many organizations, and consequently, surveillance is now considered a more prominent component of tighter security. When it comes to surveillance, data centers have found that it's sometimes easier to outsource that function. That trend will likely be reversed as budgets remain tight and as today's (in-house) computer technology proves to be capable of handling all surveillance needs.

According to Ken M. Shaurette, CISSP, CISA, CISM, "IT can provide the systems and support like they do for any other computing system connected to the environment. Physical security or another group would actually use the surveillance application and monitor the video. I don't personally believe IT will have that complete responsibility. Managing the data and the system maybe, but actually having staff that does the actual monitoring of the surveillance activity I don't

Promising Product Spotlight

While video surveillance can be a crime deterrent and handy for catching criminal activity, it usually results in countless hours of video footage, making pinpointing criminal activity a time-consuming and arduous task. A company called 3VR Security has come up with some unique surveillance products that capture and categorize as they record, allowing you to search surveillance video quickly and easily via its 3VR Intelligent Video Management System (www.3vr.com). It even offers an ROI calculator on its Web site to give your data center a good idea of how 3VR Security products can offer a good return on your investment.

see coming into IT. That will remain the responsibility of a physical security team."

Steve Crutchley, president and CTO at 4FrontSecurity, holds a similar view: "IT have more things to worry about than video surveillance. Video surveillance is a specialist job—you really have to know what you are looking for and not jump to premature conclusions. IT people (in my view) tend to be good firefighters, not specialists."

Nonetheless, companies may conclude that they'll maintain more control if they have their IT departments handle their

information just like other potentially sensitive data, backup, [and] archive and provide discovery features."

Tools Of The Trade

A number of vendors offer surveillance solutions. The IBM digital surveillance solution gives your authorized team members easy access to footage while safeguarding the privacy of that digital content (www.ibm.com). It reduces company expenses by centralizing surveillance operations, by using a user-friendly interface, and by

Companies may conclude they'll maintain more control if they have their IT departments handle their organization's surveillance strategies.

organization's surveillance strategies. The good news is that the price of the equipment has decreased to the point where businesses can easily recoup their investment, simply by reducing losses that result from outright theft or from workers squandering company work time.

Security vs. Privacy

Before handing the surveillance baton off to your IT department, the company needs to know what legal issues surround the monitoring and recording of worker and/or visitor activities. Some of today's cameras are so small that they're practically invisible. Without going into legal specifics, in general, intrusions of personal privacy cross the constitutional line only if the conduct infringes upon some "reasonable expectation of privacy." Here you will need to contact legal counsel, but in general it means no surveillance in bathrooms, locker rooms, or other places where privacy is expected, or a given.

To eliminate speculation, it's a good idea for employers to be upfront about monitoring and to inform all employees what they can expect in terms of being monitored. This not only means the company is to advise the employees of how and where and when they're being monitored but also how data gleaned from that monitoring is going to be used and stored (if at all).

Says Shaurette, "It does make some sense, especially if the surveillance is using IP-based cameras and storage is handled no different than any other data. It becomes obviously important to secure the

automating some security functions. The IBM solution bypasses the need for your staff to manually archive data by automatically archiving new content and purging old footage, as determined by your organization's preset parameters. IBM boasts that its system can easily be integrated with other systems (such as facility access security), and it can operate with wireless technologies

and a myriad of industry-standard communication and software technologies.

From AxionTech comes a variety of surveillance products. Not only can AxionTech build and install made-to-order computer-based video surveillance systems for your organization, but it also carries products from manufacturers including GrandTec, Chance-i, CyberVision, Formosa Industrial Computing, and PTZ (Pan-Tilt-Zoom) cameras. AxionTech especially recommends Formosa Industrial Computing's VPON – Video Picture On Net, a Linux-based remote video Web camera server that is rich in features.

Digi-Watcher.com offers easy-to-use surveillance systems with two products: RemoteView and Watcher. Watcher captures motion using a Webcam and saves it into compressed video clips (with audio). Watcher (which your organization may wish to run on stealth mode) triggers alerts via email or phone and has camera image broadcasting capability, which can broadcast your company Webcam on a remote Web site or on Watcher's embedded Web server.

Digi-Watcher offers RemoteView as an additional free tool that can connect to Watcher via a telephone modem or TCP/IP, allowing your company to carry out surveillance from any location by real-time video/audio streaming.

In the end, if your organization has opted to have surveillance strategies carried out in-house, then your team (IT or otherwise) must be included in the adoption and setup of that strategy. With the ever-growing number of surveillance solutions now available in this arena, finding the right one for your company requirements is made that much easier. □

PC-Based Digital Video Surveillance Systems

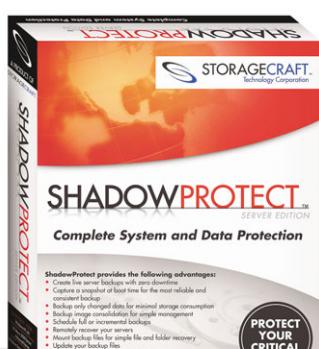
Product	Description	Web Site
AxionTech	Offers a wide range of products such as IP network cameras and other digital surveillance equipment from dozens of manufacturers	www.axiontech.com
Digi-Watcher	Offers the ability to monitor your data center 24/7 by motion event captures using Web cam technology; captures can be broadcast, allowing you to "publish" them to a remote Web site or Watcher's embedded Web server	www.digi-watcher.com
Remote Video Surveillance	Offers specialized digital video recorder cards and systems for CCTV and surveillance applications with four, eight, or 16 camera inputs	www.remotevideosurveillance.com
WiLife	Introduced the world's first networked Spy Camera; offers a wide variety of indoor and outdoor surveillance products that are PC-based and wireless to boot	www.wilife.com

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	15	15	17	17	19	19
Model	LDS210D	LDS210D-8P	LDS310D	LDS310D-8P	LDS410D	LDS410D-8P
Size of panel	15"	15"	17"	17"	17"	17"
KVM	1 port	8 ports	1 port	8 ports	1 port	8 ports
Display Area (mm)	304.1 (H) x 228.1 (V) (15.0-inch diagonal)	304.1 (H) x 228.1 (V) (15.0-inch diagonal)	337.92 (H) x 228.1 (V) (17.0-inch diagonal)	337.92 (H) x 228.1 (V) (17.0-inch diagonal)	376.3 (H) x 301.1 (V) (19.0-inch diagonal)	376.3 (H) x 301.1 (V) (19.0-inch diagonal)
Pixel Pitch	0.297 (H) x 0.297 (V)	0.297 (H) x 0.297 (V)	0.264 (H) x 0.264 (V)	0.264 (H) x 0.264 (V)	0.294 (H) x 0.294 (V)	0.294 (H) x 0.294 (V)
Number of Pixels	1024 (H) X768 (V)	1024 (H) X768 (V)	1280 (H) X1024 (V)	1280 (H) X1024 (V)	1280 (H) X1024 (V)	1280 (H) X1024 (V)
Contrast Ratio	500:1	500:1	400:1	400:1	600:1	600:1
Display Color	16.2M(6bits+FRC)	16.2M(6bits+FRC)	16.7M(8bits/colors)	16.7M(8bits/colors)	16.7M(8bits/colors)	16.7M(8bits/colors)
Brightness (cd/m²)	250 (Typ.)	250 (Typ.)	280 (Typ.)	280 (Typ.)	250 (Typ.)	250 (Typ.)
Input Signal	RGB Analog	RGB Analog	RGB Analog	RGB Analog	4 replaceable CCFLs edge-light(top/Bottom)	4 replaceable CCFLs edge-light(top/Bottom)
Viewing Angle	- 65° ~ 65° , - 55° ~ 65°	- 65° ~ 65° , - 55° ~ 65°	- 70° ~ 70° , - 60° ~ 60°	- 70° ~ 70° , - 60° ~ 60°	- 85° ~ 85° , - 85° ~ 85°	- 85° ~ 85° , - 85° ~ 85°
I/O	Power: 12DV adapter Keyboard: PS/2 Mouse: PS/2 VGA: 15-pin D-Sub					
Keyboard and Key pad	88-key keyboard and integrated Touch Pad 17-key numerical key pad	88-key keyboard and integrated Touch Pad 17-key numerical key pad	88-key keyboard and integrated Touch Pad 17-key numerical key pad	88-key keyboard and integrated Touch Pad 17-key numerical key pad	88-key keyboard and integrated Touch Pad 17-key numerical key pad	88-key keyboard and integrated Touch Pad 17-key numerical key pad
Power Consumption	33 Watts	33 Watts	38 Watts	38 Watts	44 Watts	44 Watts
Power Supply	AC 100-240V Universal					
Hot Key Control	OSD Hot Key					
Temperature	0°C~50°C in operating; -20°C~60°C in storage					
Humidity	10-85% in operating; 10-90% in storage					
Size	515mm (D) x484mm (W) x44mm (H)					



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